DOES SELF-ESTEEM, SOCIAL ANXIETY AND FRIENDSHIP QUALITY PREDICT ONLINE AND OFFLINE PEER VICTIMISATION?

Rachel Kirkham

1201413

J31677

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Title Page

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Declaration

“This piece of work has not been submitted in relation to any other degree of qualification and is original”.

Date: 26/09/2017

Student: J31677

Signature: ……..

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Module Meeting Log 2016/2017

SUPERVISOR: Professor Mike Boulton

				Signatures	
Date:	Time:	Topic:	Agreed Action:	Tutor:	Student:
1/03/17	30mins	Choosing topic	Group project Think about constructs Possible schools to contact		
08/03/17	30mins	List constructs Discussed measures	Find suitable measures for constructs to be used in questionnaire		
15/03/17	30mins	Accessed Bristol Online Surveys Discussed ethical approval application	Upload items for questionnaire onto BOS Begin ethics form		
22/03/17	30mins	Discussed ethical approval application	Complete individual ethical approval application Begin Literature review		
5/04/17	30mins	Review ethical application for ethical approval prior to submission	Submit ethical approval form		
10/05/17	30mins	Discussed reviewers comments and amendments for ethical approval	Complete ethical amendment form		
24/05/17	30mins	Ethical approval obtained, discuss how to collect data	Begin to collect data in schools		
21/06/17	30mins	Arranged dates for when everyone could meet up once data collection was complete	Continued data collection		
12/07/17	3hrs	Data analysis Individual research questions	Prepare full draft of dissertation		
14/09/17	30mins	Draft Feedback	Make amendments		

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Abstract

The current study aimed to investigate whether self-esteem, social anxiety and friendship quality predicted online and offline peer victimisation. Previous literature highlighted that self-esteem, social anxiety and friendship quality was likely to predict offline victimisation (Boulton, Trueman, Chau, Whitehand and Amayta, 1999; Hodges Boivin Vitaro & Bukowski, 1999; Boivin & Hymel, 1997; Egan & Perry, 1998). However, there was limited and inconsistent literature around the predicting factors and online victimisation (Ybarra and Mitchel, 2004; Hinduja & Patchin, 2008; Prizant-Passal *et* al, 2016). Self-report questionnaires were administered in schools, to children who were 10-16 years old (N=653). 2 X multiple regressions revealed that self-esteem, social anxiety and friendship quality all collectively predicted online and offline victimisation. Therefore, 2 hierarchical regressions were carried out to see if each factor uniquely predicted each dependent variable. Findings revealed that self-esteem and social anxiety both uniquely predicted online and offline victimisation; however, friendship quality did not. The current study raises recommendations for methodological improvement. Nevertheless, the current findings contribute towards existing research as specific factors, which leave children vulnerable to peer victimisation, are highlighted. This raises awareness for teachers and parents as they can identify vulnerable children and monitor their online and offline activity. Additionally, the current study allows for future researchers to expand upon these findings, and create early interventions for children who are at risk of victimisation, which would contribute towards the prevention of peer victimisation for future generations.

Key Words: Victimisation, Online, Social Anxiety, Self-esteem, Friendship Quality

Introduction

The current study will investigate 3 potential factors that predict offline and online peer victimisation. Firstly, both offline and online victimisation will be discussed, followed by the 3 predicting factors: self-esteem, social anxiety and friendship quality, which will be addressed as issue 1, 2 and 3 below. The fourth issue will discuss how to test the psychometric properties of each scale that will be used in the current study, to ensure they are reliable and valid.

Bullying / Victimisation / Online and Offline

Bullying is defined as deliberately intending to harm another person through using a specific type of aggression, over a repeated length of time (Nansel Overpeck Pilla Ruan Simons-Morton & Scheidt, 2001). Bullies tend to want to dominate others, be impulsive and are hostile (Olweus, 1993). They are typically aggressive towards, not only the victim, but other children in their class (Olweus, 1993). More often than not, bullies tend to have a dislike for schooling and are associated with having conduct problems (Nansel *et* al, 2001; Olweus 1978; Boutlon & Underwood, 1992). Negative outcomes are also evident in later adulthood as those who bullied others have increased risk of criminal behaviour (Nansel *et* al., 2001).

Conversely, a person who feels they are targeted by a bully's aggressive behaviour is known as a victim. Victimisation is a rising issue as research across Europe and America revealed that 6-10% of children report being victimised at least once a week (Olweus, 1994; Perry, Kusel, & Perry, 1988; Erath Flanagan & Bierman 2008; Nansel *et* al., 2001). However, further researchers argue that the rates are even higher as this does not account for the incidents that go unreported (Ross, 1996). This highlights the severity of victimisation as this figure reinforces that most children, at some stage, experience it (Erath *et* al, 2008). Therefore, this provides a rationale for

the current study to contribute towards this avenue of research, as victimisation is a rising issue that needs to be addressed.

Moreover, the current study will refer to 'Offline Victimisation' as children who feel they are targeted by a bully in a real life environment, such as the classroom. Research has found offline victimisation to be most prominent during ages 12-16 as children experience a huge shift in the social structure of schooling, as they move from small primary school classes to a larger high school environment (Erath Flanagan & Bierman, 2008). It can be argued that transitioning to a larger classroom environment can contribute to higher levels of peer victimisation, as there is less adult monitoring (Fenzel, 1989). This highlights the importance of studying offline victimisation, as every child experiences the transition from primary school to high school.

Furthermore, bullies can target their victims both directly and indirectly (Nansel *et* al, 2001). This can be done verbally (E.G name-calling), physically (E.G punching someone), and psychologically (E.G deliberately excluding someone) (Nansel *et* al, 2001). British research, which obtained data from 23 schools, revealed that the most common form of bullying was verbal aggression (Rivers & Smith, 1994). This may be due to verbal aggression being the least likely way for the bully to be caught, as it is 'word against word' (Rivers & Smith, 1994). Therefore, bullies may be less likely to physically harm victims, as evidence (such as bruises) can be left, similar to psychological bullying which involves others who may report the bully (Rivers & Smith, 1994). Nevertheless, all three types of bullying have been reported to result in long-term maladjustment problems for victims (Reijntjes Kamphuis Prinzie & Telch, 2010; Hawker and Boulton 2000; Kochenderfer & Ladd, 1996; Schwartz Gorman Kakamoto and Toblin, 2005). Considering this, previous research has developed interventions to help reduce the severity of maladjustment problems for victims, however there is little evidence of early interventions which prevent bullying from occurring in the first place. Therefore, this provides a rationale for the current study to investigate what factors put

children at risk of victimisation, in order to identify and support these children so they are less likely to be targeted by bullies (Hodges Boivin Vitaro & Bukowski,1999). Additionally, it will help researchers understand what qualities bullies look for in victims, which provoke them to attack (Hodges *et* al,1999).

Moreover, there are several ways offline victimisation can be measured. Some studies have used observations in the children's natural environment, such as the playground (Pellegrini & Long, 2002). However, this method can be criticised as children are less likely to display bullying behaviours if they are aware they are being watched (Card & Hodges, 2008). This type of method also leaves room for researcher bias, because what one researcher may classify as victimisation, another one may not (Cozby, 2012). Other studies have used teacher and peer reports; however, this may not be effective as many instances go unnoticed, therefore only the extent to which victimisation is known by others would be measured (Card & Hodges, 2008). This highlights why self-report data is the most valuable measure of victimisation, as the victims themselves are aware of their victimisation experiences and how they have been impacted (Card & Hodges, 2008). Therefore, this provides a rationale for the current study to use self-report data.

Boulton Trueman and Murray (2008) created a self-report victimisation scale which was found to be reliable. Three t-tests were carried out for each type of victimisation: physical, verbal and psychological, all revealing a significant result ($P < .001$) (Boulton Trueman and Murray, 2008). This reflects that participants who reported they were victims of bullying in an interview with researchers, also scored highly on the self-victimisation scale (Boulton Trueman and Murray, 2008). Therefore, this highlights that the self-victimisation scale was both reliable and valid (Boulton *et* al, 2008). Additionally, the scale has been used in more recent studies, where the items in each subscale (physical, verbal, psychological) were found to be highly and significantly correlated ($P< .001$) (Boulton, 2013). Also, due to the research obtaining a longitudinal

design, this allowed for test re-test reliability to be carried out, with a two-week time gap, which revealed highly significant results with r's between .78 and .84 (Boulton, 2013). Therefore, this reflects that the scale is highly reliable due to the r results being close to one (Field, 2009). Therefore, as a result of the self-report victimisation scale being consistent across studies, this provides a rationale for the current study to use the scale.

In addition, children can also be victims of bullying on the internet, which the current study will refer to as 'online victimisation'. The internet can be defined as a system that provides vast amounts of information across billions of devices worldwide (Labovitz Ahuja Bose & Jahanian, 2000). Findings reveal that children between 10 and 19 years old, use the internet the most, as 99% of children reported having access (Livingstone, 2009). In more recent years', children now consider 'games' and 'play time' as an opportunity to engage with devices such as mobile phones and computers, which all have internet access (Livingstone Davidson Bryce Hargrave & Grove-Hills, 2012). This is due to recent generations using the internet as the main tool for education and play (Livingstone, 2009; Livingstone *et* al, 2012).

However, the internet raises potential issues as children who do not use it wisely, have increased chances of being exposed to harmful content online (Lee & Chae 2012; Livingstone, Haddon, Görzig, & Ólafsson, 2010; Wolak Mitchell & Finkelhor, 2006). Findings have revealed that up to 30% of children under the age of 17 are victims of online bullying (Hinduja & Patchin, 2008; Patchin & Hinduja, 2006). This is supported by 'Kids EU' online, which reported that out of a survey of 25,000 children, 30 % had spoken to a stranger online and 14% had received malicious messages online (Livingstone Kirwil Ponte & Staksrud, 2014). Considering this, due to the ability to anonymise one's identity online, this frees individuals from the traditional pressures of society, conscience and ethical behaviours, which results in more individuals believing that it is acceptable to use such malicious language to harass

others online (Hinduja & Patchin, 2008). Therefore, this provides a rationale for the current study, as the risk of children being victimised online needs to be reduced (Livingstone et al, 2014; Slavtcheva-Petkova *et* al, 2014).

In addition, the theory of perceived behavioural control would argue that bullies are more likely to attack victims online, as they perceive the task to be easier due to having more control (Boulton Hardcastle Down Fowles & Simmonds, 2014). This is because the bully has the ability to anonymise their identity online, as well as edit and reflect on the words used, in order to maximise distress towards others (Boulton *et* al, 2014; Valkenburg & Peter, 2011). Therefore, this reinforces that children are at an increased risk of being victimized online (Boulton *et* al, 2014; Valkenburg & Peter, 2011).

Conversely, online victimisation has limited ways in which it can be measured. This is because children's online activity is more difficult to measure, as accounts and passwords can be set up, which nobody else has access to (Basu & Jones, 2007). Additionally, the National children's home (2005) reported that children are not comfortable in informing anyone of their experiences online, as research revealed 28% of children did not inform anyone at all if they were victimised online. Therefore, this provides a rationale for the current study to use self-report scales, as the victims themselves are aware of their own personal experiences (Card & Hodges, 2008).

Considering this, 'Global Kids Online' have developed a quantitative toolkit which measures online victimisation through self-report questionnaires (Byrne Kardefelt-Winther Livingstone & Stoilova, 2016). The 'Global Kids Online' is an international research project which has developed a global research toolkit to enable academics to carryout reliable and standardised national research, with children aged 10-17, on the opportunities and risks online (Byrne *et* al, 2016). Therefore, the current research will use this toolkit to measure online victimisation, as it contains standardised

questions, which are internationally reliable. Additionally, Boulton Trueman and Murray (2008) scale contains an item which measures online victimisation, and will therefore be used in the current research, as the scale was found to be both reliable and valid across studies, as highlighted above (Boulton *et* al, 2008; Boulton, 2013).

Issue 1 - Self-esteem as a predictor of offline and online victimisation

Low self-esteem is defined as an unfavourable view towards one's self (Rosenberg, 1965). Children with low self-esteem tend to present characteristics such as crying easily, withdrawing from social groups, lack of humour, and low self-confidence (Hodges Boivin Vitaro & Bukowski,1999; Boivin & Hymel, 1997; Egan & Perry, 1998). Research states that children can develop low self-esteem as result of their attachment style to their caregiver during infancy, as infants whose emotional needs are not met, grow up to believe they are not worthy (Bowlby, 1973; Egan & Perry, 1998). However, additional research states low self-esteem can also be a result of trauma, a chemical imbalance in the brain or peer victimisation (Harter, 1993; Hawker & Boulton, 2000). Considering this, there has been consistent findings on low self-esteem as an outcome of victimisation, leading to the development of interventions to help victims re-build a positive view of themselves (Bond *et* al, 2001; Kowalski & Limber, 2013; Hawker & Boulton, 2000). Conversely, there is limited research around self-esteem as a predictor of victimisation, therefore providing a rationale for the current study to broaden this area of research.

Nevertheless, the limited research available highlights that victims with low self-esteem may be bullied as a result of displaying physical traits associated with low self-esteem, which imply that they are weak and unable to defend themselves (Hodges Boivin Vitaro & Bukowski,1999; Boivin & Hymel, 1997; Egan & Perry, 1998). This is consistent with findings that state bullies tend to seek out easy targets who they are

confident will not retaliate (Boutlon & Underwood 1992; Hodges Malone & Perry, 1997; Olweus, 1993; Erath *et* al, 2008; Perry Williard & Perry, 1990). Therefore, it could be argued that victims invite their bullies to attack them through displaying submissive behaviours (Boivin & Hymel, 1997; Egan & Perry, 1998). This is reflected in research as adolescents reported to be unsympathetic towards victims of bullying as they 'bring it on themselves' (Hoover, Oliver, & Hazier, 1992: Rigby & Slee, 1991).

In addition, children with low self-esteem often have high levels of self-blame (Graham & Juvonen, 1998). Therefore, children with low self-esteem are more likely to display behaviours that provoke bullies to attack them, as they believe they deserve it (Graham & Juvonen, 1998). This is supported by findings which reveal children with low self-esteem are viewed as an annoyance by others, due to excessively seeking out reassurance about their personal worth (Orth Robins & Roberts, 2008). The self-verification theory reinforces this as it states some victims may seek out their attackers in order to confirm their low self-worth, so they are able to make sense of their experiences. Troy and Sroufe (1987) confirms this as they found that some victims even approached their bully and asked "aren't you going to tease me today?" Nevertheless, conflicting research highlights that children with low self-esteem present traits such as crying and low mood, therefore it would be unlikely that they would have the confidence to confront a bully (Hodges Boivin Vitaro & Bukowski,1999; Boivin & Hymel, 1997; Egan & Perry, 1998). Despite this, it has been consistently found across research that being bullied confirms the victim's low self-esteem, and further degrades their negative self-concept (Joiner, 2000; Orth Robins & Roberts, 2008). This can be dangerous as additional research highlights children with low self-esteem, who are exposed to stressful life events (such as victimisation), can spiral into depression and thoughts of suicidal ideation (Joiner, 2000). Therefore, this highlights the severity of how victimisation can affect vulnerable children, providing a rationale for the current study to investigate self-esteem as a predictor of victimisation.

Furthermore, research highlights that children with low self-esteem often have an internal negative view of themselves and others (Harter, 1993). As a result, this leads to a pessimistic view towards life, as they expect others to bully them and assume that bad things will always happen to them (Blaine & Crocker, 1993; De La Ronde & Swann, 1993; Egan & Perry, 1998). This is supported by Beck's (1967) theory which states that individual's with a negative self-concept, tend to develop a negative view about the world, which leads to the development of negative beliefs about the future. This can lead to a vicious cycle for the victim, because once their negative view of self is confirmed through being bullied, this can result in the victim accepting and letting people bully them in the future (Beck, 1967). Therefore, this suggest that those children with a negative view of self are more likely to be victimised, as they expect to be treated badly by others.

Moreover, there is limited research around self-esteem as a predictor of online victimisation, therefore providing a rationale for the current study to broaden this avenue of research. Nevertheless, the research available suggests that those children who have low self-esteem, often feel more confident when browsing and speaking to people on the internet, as they feel they cannot be judged behind a computer (Ybarra and Mitchel, 2004). This may be due to speaking to strangers on the internet, or keeping their identity unknown online (Ybarra and Mitchel, 2004). This is supported by research which found power and dominance to be exerted online when a person's identity is unknown (Ybarra and Mitchel, 2004). Therefore, this would suggest that children with low self-esteem are less likely to be victims of online bullying due to their increased confidence and unknown identity when surfing the web (Hinduja & Patchin, 2008).

Conversely, findings reveal that 84% of online bullies personally know their victims (Ybarra and Mitchel, 2004; Hinduja & Patchin, 2008). This highlights that when a child's identity is known online, victimisation can be an extension of the playground

(Hinduja & Patchin, 2008). This suggests that online victims are targeted due to bullies already being aware of the child's low self-esteem and submissive behaviour in real life settings. This is reinforced by findings which reveal 44% of victims offline also report being victims online (Ybarra and Mitchel, 2004). However, conflicting research would argue that online victims are more likely to retaliate and stand up for themselves, as they have increased confidence when behind a computer (Prizant-Passal Shechner & Aderka, 2016). Therefore, this implies that the internet can act as a barrier towards bullying, as children with low self-esteem can protect themselves due to their increased confidence online. Despite this, it is more realistic to assume that if the victim was aware of who their bully was online, they would be less likely to retaliate out of fear they would receive consequences when confronted by the bully in school (Ybarra and Mitchel, 2004).

Nevertheless, the current study will measure self-esteem using self-report data as the individuals themselves are most aware of their emotions (Card & Hodges, 2008). Thomaes and colleagues (2010) have developed a self-esteem scale which measures individual's overall self-worth in the present moment (Thomaes Reijntjes Orobio de Castro Bushman Poorthuis Telch 2010). The scale was modelled on Rosenberg's (1965) self-esteem and Harter's (1985) self-perception profile for children, which are traditional measures that are highly reliable and valid across research (Callaghan & Joseph, 1995; Muris Meesters & Fijen, 2003; Robins Hendin & Trzesniewski, 2001). However, Thomaes et al (2010) scale is more recent which provides a rationale for the current research to use this measure. It also reported alpha levels of up to .80 in their research, which exceeds the criterion of .70 set by researchers, reinforcing its high reliability (Field, 2009; Thomaes *et* al, 2010). The scale has also been reported to be effective with adolescents and children as the scale was strongly associated with a one item pictorial self-esteem measure, with r's of .71 ($P < .001$) (Thomaes, Bushman, Orobio de Castro, Cohen, & Denissen, 2009). Therefore,

this again provides a rationale for the current research to use this scale, as it is effective with the age group this study aims to recruit.

Issue 2 – Anxiety as a predictor of offline and online victimisation

Social anxiety is defined as a fear or discomfort in a social context where the individual feels judged (Stein & Stein, 2008). The typical traits displayed by an individual with social anxiety tend to be nervousness, shyness and being socially withdrawn (Stein & Stein, 2008). Children can develop social anxiety through several different ways, for example traumatic experiences, attachment during infancy, or even a chemical imbalance in the brain (Stein & Stein, 2008). Social anxiety is commonly found to be an outcome of victimisation, which has led to the development of interventions to help individuals build up their social skills after they have been bullied (Hawker & Boulton, 2000). However, there is less research around social anxiety as a predictor of victimisation, which is why the current study aims to broaden this area of research. This way, early interventions can be put into place to try and prevent victimisation before it occurs.

Research highlights that children who display traits of social anxiety may be at a higher risk of victimisation, due to displaying physical signs of weakness (Stein & Stein, 2008; Boulton *et* al, 1999). This is supported by studies which reveal the way children act in social situations, is systematically linked to how peers view them (Boulton *et* al, 1999). Therefore, children may be targeted as their timid characteristics display to the bully that they would be unlikely to defend themselves (Hawker & Boulton, 2000; Hodges et al, 1999). This is reinforced by research which found adolescents who behaved submissively in play groups were increasingly victimised over time (Schwartz, Dodge, and Coie, 1993). However, an observational method was employed by the researcher which suggests findings may be a result of researcher bias (Field, 2009).

This is because, what one researcher may have coded as victimisation, the child may not (Field, 2009). Nevertheless, more recent research offers support to Schwartz and colleagues (1993) as they found that children with lower social competence, were significantly correlated with higher levels of victimisation when using self-report data (Rubin Dwyer Booth-La Force Kim Burgess & Rose-Krasnor, 2004).

In addition, children with social anxiety have been associated with having poor social skills, resulting in exclusion from social situations in order to avoid feelings of discomfort (Stein & Stein, 2008). As a result, children with social anxiety are less likely to have friends, as they avoid interaction with other children in their class (Stein & Stein, 2008; Boulton *et* al, 1999; Hodges *et* al, 1999). This is supported by research which found children who engaged in solitary, unoccupied behaviour had low levels of social impact (Ladd Price & Hart, 1990; Boulton, 1999). This could be argued to encourage bullies to attack children with social anxiety, as they show clear signs that they are different from other children in the class (Hawker & Boulton, 2000; Boulton *et* al, 1999). This is reinforced by research which found children who perceived themselves as being socially inept, were strongly linked to being bullied (Egan & Perry, 1998). Therefore, this would suggest that children with social anxiety may be targeted, as the bully is aware they do not have a support group of friends (Hodges *et* al, 1999).

Nevertheless, there has been little research around social anxiety as a predictor of online victimisation, providing a rationale for the current study to look further into this area (Prizant-Passal Shechner & Aderka, 2016). However, available research highlights that when children access the internet, it is often on devices that they have access to at home, or in their bedroom (Prizant-Passal *et* al, 2016). Therefore, this suggests that browsing online, in environments where there are no social barriers or rules, is likely to reduce anxiety (Prizant-Passal *et* al, 2016). Additionally, due to no face-to-face interaction being required when interacting online, it is likely that a socially anxious person's worry of making an undesirable impression is diminished (Leary and

Kowalski 1995). This is supported by a meta-analysis which found social anxiety to be positively correlated with comfort online (Prizant-Passal *et* al, 2016). Therefore, this implies that children with social anxiety are less likely to be victimised online due to feeling more comfortable when browsing the web. However, the current study cannot extrapolate from these findings, as the majority of research highlighted in the meta-analysis was correlational, and the current study aims to establish a causal relationship (Prizant-Passal *et* al, 2016).

Conversely, if the child's identity is known online, this may encourage bullies in the class to also seek out the victim online (Tynes Rose & Williams, 2010). This is supported by research which reveals many online incidents occur because of offline problems (Tynes Rose & Williams, 2010). Therefore, this would suggest that children who have poor friendships offline are more likely to be victimised online, due to the internet becoming an extension of the playground once school has finished for the day (Tynes Rose & Williams, 2010). Considering this, the internet not only allows bullies to network with other peers in their class, but also strangers (Byrne *et* al, 2016). As a result, psychological theory suggests that victims are more likely to be targeted online as a larger audience may be viewed as a reward by the bully (Skinner 1990; Byrne *et* al, 2016).

Moreover, Reynolds and Richmond (1985) developed the Revised Children's Manifest Anxiety Scale (RCMAS), which measures various types of anxiety. This is a revised scale, which highlights an improved version of the original Children's Manifest Anxiety Scale by Castaneda, MacCandless, and Palermo (1956). Therefore, this provides a rationale for the current study to employ this measure, as it is a more recent scale that captures the multidimensional nature of anxiety, by having 3 subscales; physiological, social concerns and concentration (Cattell & Scheier, 1961; Fenz & Epstein, 1965; Logan & Loo, 1979). This scale is widely used across research with it being one of the most popular measures of anxiety (Reynolds & Richmond, 1978;

Reynolds & Paget, 1981). Previous studies have reported alpha levels of .85 which reflect high internal consistency as it exceeds criterion of .7 (Reynolds & Richmond, 1978; Reynolds & Paget, 1981; Reynolds, 1982). Many studies have carried out a factor analysis on the revised scale and found consistency across larger samples and across sex and race (Reynolds & Paget, 1981). Additionally, this scale is appropriate for children from nursery through to 19 years old, which again provides a rationale for the current study to use this measure.

Issue 3 - Friendship Quality as a predictor of offline and online victimisation

Friendships are formed when two people connect on an emotional level and have mutual feelings of trust and support for one another (Hodges, *et* al, 1999; Oswald & Clark, 2003). Friendships are most commonly formed when children attend school as they are able to socialise with other children of a similar age (Oswald & Clark, 2003). Friendships have been found to teach children social skills, are sources of self-knowledge and self-esteem, and provide support in times of need (Hodges, *et* al, 1999; Oswald & Clark, 2003). However, during school age when children are transitioning from primary school to high school, many friendships can be threatened as they separate from old friends and form new ones (Oswald & Clark, 2003). As a result, trying to make new friendships can be hard for some children, which can leave them vulnerable to victimisation (Hodges, *et* al, 1999).

Children's friendships in school have been highlighted as a possible risk factor for offline victimisation (Hodges Boivin Vitaro & Bukowski,1999). Research found that children who had less friends were more likely to be targeted by bullies (Hodges, *et* al, 1999). This may be due to the social networking of the classroom, as it is likely that bullies will target children with less or no friends, as they are able to bully the victim without fear of retaliation from peers (Hodges, *et* al, 1999). This is reinforced by

psychological theory which suggests that children tend to conform to large friendship groups and partake in behaviours that follow the rules of the group, so they will be accepted and identified as a group member (Asch, 1956; Landsbaum & Willis, 1971). Therefore, this would imply that children who are isolated and not accepted by a social group, tend to have a higher likelihood of being victimised (Hodges *et* al,1999). Research carried out in North America confirms this as the "friendship protection hypothesis", which states that having more friends protects children from being victimised (Boivin Hymel & Bukowski, 1995; Hodges Malone & Perry, 1997). Nevertheless, such research could be criticised as results may be due to children simply choosing non-victimised children as friends (Boulton *et* al, 1999).

Nevertheless, Boulton and colleagues (1999) used a longitudinal design which provides support for the "friendship protection hypothesis" as they found children who had a reciprocated best friend at time 2, but not at time 1, had an increase in victimisation, and vice versa. Therefore, this shows that the possibility of children selecting non-victims as friends in Bukowski (1995) research can be ruled out, therefore offering support to the "friendship protection hypothesis". However, further research has found that, although a child may have several friends, this does not reduce the likelihood of them being victimised (Bollmer Milich Harris & Maras, 2005; Hodges et al., 1999). This is because the victim's friends may possess the same qualities as the victim, such as being shy and weak, which could be argued to encourage and reward the bully to target the friendship group as a whole (Bollmer Milich Harris & Maras, 2005; Hodges et al., 1999).

Conversely, researchers argue that it is not about the quantity of friends, but the quality of the relationship (Oswald & Clark, 2003; Boulton *et* al, 1999). It may be that 1 close best friend can provide a higher quality relationship and a better form of support, than 5 standard friends (Oswald & Clark, 2003; Boulton *et* al, 1999). This is supported by research which found that pupils who did not have a reciprocated best friend,

showed higher increases in victimisation (Boulton, Trueman, Chau, Whitehand and Amayta, 1999). Therefore, this would suggest that poor friendship quality may predict the likelihood of victimisation.

However, many researchers also highlight that close friendships not only have positive effects, but also negative effects (Bukowski, Hoza and Boivin, 1994; Oswald & Clark, 2003; Boulton et al, 1999). Therefore, it is important to study conflict within friendship quality, as a close friend can provide help for the victim through retaliating when their friend is targeted by the bully (Bukowski *et* al, 1994; Boulton et al, 1999). However, friends may be less inclined to support their friend when the bully attacks if they experience high levels of conflict within their relationship (Boulton *et* al, 1999). Therefore, this provides a rationale for the current study to measure different aspects of friendship quality, such as companionship and conflict.

On the other hand, more recent research highlights that children who struggle to make friendships in school, are able to go online to seek friendship (Prizant-Passal *et* al, 2016). This is because children who may be shy or lack social skills in real life settings, can pretend to be someone they are not online (Prizant-Passal *et* al, 2016). This is supported by research which reported children preferred interacting with others online, as they were able to discuss intimate topics they were ashamed to talk about in real life (Prizant-Passal *et* al, 2016). This suggests that children with poor friendships offline, may seek support online as they are able to have in-depth conversations which they feel they cannot have in real life (Prizant-Passal *et* al, 2016). Therefore, although victims may lack quality friendships offline, this does not necessarily increase online victimisation (Prizant-Passal *et* al, 2016). However, conflicting research argues that interacting online can be dangerous as children can make friendships online with people they do not know, which can increase their chances of being victimised (O'Keeffe & Clarke-Pearson, 2011). Research to support this found strangers to initially

be-friend victims online to capture their trust and attention, and then gradually began to bully the victim once the relationship developed (O'Keeffe & Clarke-Pearson, 2011).

Nevertheless, when a victim's identity is known online, it is likely that they will be targeted by school peers through online networking sites (Tynes *et* al, 2010). This is because the bully is already aware of the victim's poor friendship quality in real life, which increases their confidence to continue to attack them online without fear of retaliation (Tynes *et* al, 2010). However, it could be argued in more recent developments of social media, with networking sites such as twitter and Instagram, children can gain followers and social media friends who they do not know (O'Keeffe & Clarke-Pearson, 2011). Therefore, although victims may not have a support group of friends in a real life setting, they may have a fan base online which could potentially reduce their likelihood of being victimized online (Boivin *et* al, 1995; Hodges Malone & Perry, 1997). This is supported by the "friendship protection hypothesis" which would argue that having more friends online protects children from being victimised online (Boivin *et* al, 1995; Hodges Malone & Perry, 1997). However, it should be considered that we cannot extrapolate findings of offline victimisation to those online.

Despite this, Bukowski, Hoza and Boivin (1994) developed a scale that contained both positive and negative subscale measures of friendship quality. This provides a rationale for the current study to use this scale as both companionship and conflict were highlighted in previous research as important factors, which collectively measure friendship quality (Boulton *et* al,1999). All subscales had strong internal consistency when used in previous studies, with alpha levels of .85 being reported, exceeding the set criterion of .7 highlighted by researchers (Terrion Rocchi & O'Rielly, 2015; Lansford, Yu, Pettit, Bates, & Dodge, 2014). Additionally, the validity of the scale was reflected by the observation of higher scores for mutual and stable friends, than non-mutual and unstable friends (Bukowski, Hoza & Boivin, 1994). Additional research also highlighted that the items on the scale accounted for 35% of the variance for their

data set, which exceeds the criterion of 30% set by researchers (Furman, 1996). Again, this provides rationale for the current study to use this scale as it is highly reliable and valid throughout multiple research papers.

The Current Study

Overall, the current study will carry out two standard multiple regressions. This method will be used as the current study wants to predict the value of the dependent variable based on the value of 3 other variables (Field, 2009; Pallant, 2010).

The research presented on offline victimisation suggests that children with low self-esteem, social anxiety and poor friendship quality may have an increased vulnerability to being victimised (Boulton, Trueman, Chau, Whitehand and Amayta, 1999; Hodges Boivin Vitaro & Bukowski,1999; Boivin & Hymel, 1997; Egan & Perry, 1998). Based on the literature presented, the current study will test the one tailed hypothesis: self-esteem, social anxiety and friendship quality will predict offline victimisation (refer to table 1 below for specific hypotheses).

Conversely, the research presented on online victimisation was inconsistent (Ybarra and Mitchel, 2004; Hinduja & Patchin, 2008). Therefore, due to the limited research available, the current study will not be able to predict a directional hypothesis (Field, 2009; Pallant, 2010). Therefore, the current study will investigate whether self-esteem, social anxiety and friendship quality predicts online victimisation (Refer to table 1 below for specific research questions).

Furthermore, if the results of the two multiple regressions are significant, two hierarchical regressions will then be carried out (Refer to table 1 below for specific hypotheses). This method will show whether the predictor variables of interest

statistically explain a significant amount of variance in the dependent variable (Refer to figure 1 below)

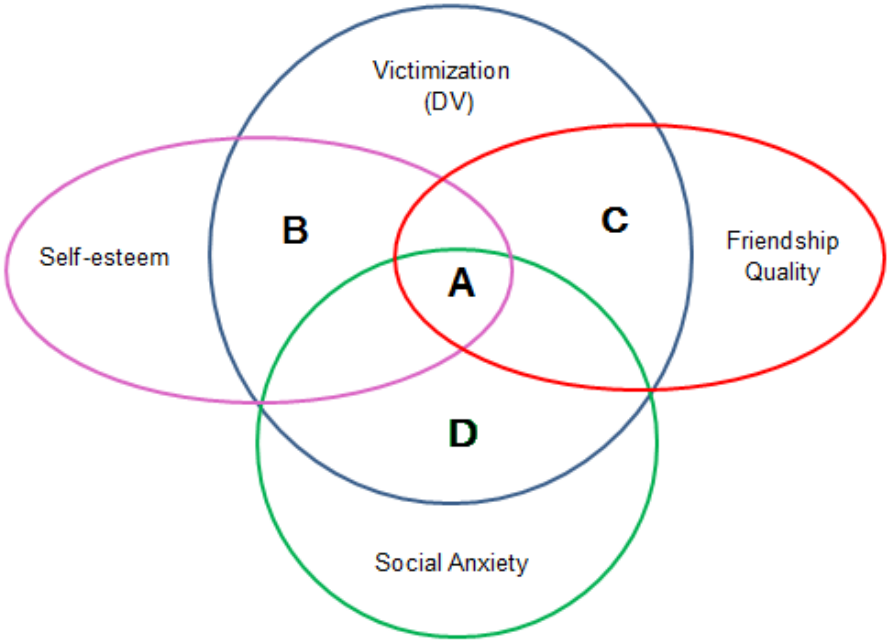

***Figure 1. A Ven* diagram explaining variance in regression models**

A = shared variance between the 3 predictors and the dependent variable
B = shared variance between self-esteem and the dependent variable
C = shared variance between friendship quality and the dependent variable
D = shared variance between social anxiety and the dependent variable

The first hierarchical regression will investigate how much of the variance together self-esteem, social anxiety and friendship quality account for offline victimisation, (refer to letter A presented in figure 1). Then, current study will investigate whether each one can uniquely predict offline victimisation, and if so, how much variance do the 3 predictors uniquely predict offline victimisation (Refer to letters B, C and D in Figure 1).

The second hierarchical regression will investigate how much of the variance together self-esteem, social and friendship quality account for online victimisation (Refer to letter A in figure 1). Then, it will be investigated whether each one can

uniquely predict victimisation, and if so, how much variance do the 3 predictors uniquely predict online victimisation (Refer to letters B, C and D in Figure 1).

It is important to consider how each predictor uniquely relates to the dependent variable, as all the predictors may collectively predict victimisation, however when considered individually, it may be that only certain predictors are able to uniquely predict victimisation. Therefore, the current study will use hierarchical regression in order to identify the most important predictors of both online and offline victimisation.

Issue 4 – Testing Psychometric Properties

The psychometric properties of the scales used in this research, will be tested to ensure the scale is of high quality (Field, 2009; Pallant, 2010). Before participant's scores can be computed into an overall score, researchers need to be confident that the overall score is accurate (Streiner, 2010; Field, 2009). This is because the overall score will represent error if participants have answered inconsistently (Streiner, 2003; Field, 2009). Therefore, reliability and validity tests will be carried out on each scale, except the offline victimisation scale (Boulton *et* al, 2008). This due to the offline victimisation scale measuring different types of victimisation; therefore, we do not expect respondents to respond consistently (Boulton *et* al, 2008). If the victimisation score produced a low alpha, this would just simply suggest that peers are victimised in different ways, it will not be a reflection of the reliability of the scale. Therefore, the current study will test the psychometric properties of all the scales except the offline victimisation scale.

Reliability

Reliability is when participant's responses are consistent across a set of items (Cronbach, 1951; DeVon, Block, Moyle-Wright, Ernst, Hayden, Lazzara & Kostas-

Polston, 2007; Field, 2009). This can be tested for using test re test method, which is the most commonly used method by researchers, as it allows researchers to compare results across two time periods, to see if the results are consistent (Cozby, 2012; Field, 2009; Pallant, 2007). However, the current study offers a critique for this method as participants are only available to be tested once. Considering this, the split half method is able to test reliability by splitting the items on the scale into two halves, computing an overall score based on the correlation between the two halves (DeVon *et* al, 2007; Streiner, 2010; Pallant, 2007). However, Lev Cronbach (1951) developed a more advanced technique which was able to capture an average of all the possible split half methods, which ensured a more accurate result of reliability. Therefore, the current study will carry out Cronbach's alpha as it is convenient for this study due to only having one opportunity to meet with participants (Cronbach, 1951; Field, 2009).

Furthermore, in order to determine whether the scale is of high reliability, researchers recommend a criterion of 0.7; therefore, the current study will aim for all scales to achieve this alpha level (Field, 2009; Mclelland, 1980; DeVon *et* al, 2007). Despite this, some researchers argue that the higher the alpha level, the better (Pallant, 2007). However, if alpha achieved a perfect score of 1.0, this would imply that all the items on the scale were redundant, as they would all measure exactly the same thing (Pallant 2013; Field, 2009). Therefore, this provides a rationale for the current study to adopt the 0.7 criterion.

In addition, it should be considered that alpha is not a property of the scale (Field, 2009; Streiner, 2010). This highlights that the alpha levels presented in previous research may not be consistent with the current study's data set (Field, 2009; Streiner, 2010). Therefore, alpha will be carried out for every scale used in the current study, to ensure they are all reliable with the sample.

Validity

Moreover, the validity of the scales will also be tested to ensure all of the items are measuring the same construct (Field, 2009; Pallant, 2010). This is because the scales may have high reliability, and return the same result each time; however, the scale could be measuring something completely different (Colliver Conlee and Verhulst, 2012). Principle component analysis (PCA) is the most commonly used technique by researchers, as it highlights the number of main factors measured by a set of items in a scale (Wold Esbensen & Geladi, 1987; Abdi & Williams, 2010). Therefore, this provides a rationale for the current study to use PCA as this is the most commonly used method and reduces the amount of work for researchers, due to combining all items and testing for one main factor rather than testing each item individually (Abdi & Williams, 2010; Wold Esbensen & Geladi, 1987). Ideally, for each scale, researchers want one main factor (Abdi & Williams, 2010; Wold Esbensen & Geladi, 1987).

Considering this, in order to identify the main factors in the scale, researchers will use scree plot or Kaiser's criterion (Pallant, 2010; Field, 2009). Scree plot determines the amount of main factors, by identifying the first point of inflection from the left (Cattell, 1966). However, this can leave room for error, as it is a subjective method, based on the researcher's opinions of where the point of inflection is (Pallant, 2010; Field, 2009). Therefore, other researchers adopt Kaiser's criterion which produces Eigen values for each main factor highlighted in the scale (Kaiser, 1970; Field, 2009; Pallant, 2010). Researcher's highlight that any Eigen values below one should be dismissed as a trivial factor (Kaiser, 1970). Despite this, the current study will adopt Occam's principle of parsimony, using the method which produces the simplest form (Pallant, 2010; Field, 2009).

In addition, the scale's validity will be ensued by testing the relationship between the items on the scale and the main factor (Cozby, 2012; Field, 2009). This will be reflected by the factor loading score which researchers state should be 0.3 or above, as this represents a strong relationship to the main factor (Field, 2009). Variance will also be tested for to identify how much variability there is amongst participants explained by the main factor (for example why some participants score high and why some score low) (Pallant, 2012; Field, 2009). Researchers highlight that a criterion of 30% or more reflects good variability (Cozby, 2012; Field, 2009).

Table 1 below shows the specific hypotheses and research questions for the current study:

Table 1

Summary of hypotheses and research questions for the current study

Offline Victimisation	
Research Hypothesis 1a	Self-esteem, social anxiety and friendship quality will collectively predict offline victimisation.
Research Hypothesis 1b	If significant, the current study will investigate how much of the variance together self-esteem, social anxiety and friendship quality account for offline victimisation.
Research Hypothesis 1c	The current study predicts that self-esteem, social anxiety and friendship quality will each uniquely predict offline victimisation, and if so, it will then be investigated how much of the variance does self-esteem, social anxiety and friendship quality uniquely predict offline victimisation.
Online Victimisation	
Research Question 2a	The current study will investigate whether self-esteem, social anxiety and friendship quality collectively predict online victimisation.
Research Question 2b	If significant, the current study will investigate how much of the variance together self-esteem, social anxiety and friendship quality account for online victimisation.
Research Question 2c	The current study will then investigate whether each one can uniquely predict online victimisation, and if so, how much variance does self-esteem, social anxiety and friendship quality uniquely predict online victimisation.

Method

Participants

Participants were both male and female children, aged between 10 and 16 years old, who attended school and were in years 6 to 11. Schools across the North West of England and Wales were approached. Opportunity sampling was used in order to save time as researchers were located close to these areas, therefore schools could be easily accessed. Additionally, there was lack of funding for this research so schools within close proximity saved travel costs. Some researchers already had contacts within schools, which saved time when selecting schools for data collection. Overall, 653 participants were obtained.

Measures

The current study used a closed questionnaire, as research highlights this is an effective method with children aged 10-16 as they are less likely to become fatigued or bored with the task (Scott, 2000). Although it could be argued that closed questionnaires provide less detail, if the questionnaires have good psychometric properties, researchers can be confident that the data will be accurate and meaningful (Field, 2009).

Overall, the questionnaire was made up of 7 scales and contained 52 items. A likert scale with 4 response options was used, and coded respectively from 1 to 4. However, due to items being both positively and negatively worded, the negatively worded items were reverse coded on the data system SPSS.

Nevertheless, the current study only used 5 of the scales from the overall questionnaire: offline victimisation, online victimisation, self-esteem, social anxiety and friendship quality. The details of the individual scales are listed below.

Offline Victimisation:

Boulton Trueman and Murray (2008) self-report victimisation scale was used. However, the current study only used 3 items from this scale which asked respondents how often they experienced 3 types of offline victimisation: physical, verbal and psychological E.G. “How often in the last year has a child hit and kicked you to make you feel bad?” (Refer to Appendix A). There were 4 response options from ‘never’ to ‘lots of times’, all scored respectively from 1 to 4. Therefore, higher scores on this scale indicated higher levels of offline victimisation.

Online Victimisation:

The online victimisation scale consisted of 2 items. The first item was from Boulton Trueman and Murray (2008) self-report victimisation scale, which stated ‘how often in the last year has another child been mean to you on a text or online to make you feel bad?’ (Refer to appendix A). The item was scored with a four point likert response from ‘never’ to ‘lots of times’, scored respectively from 1 to 4. The second item was a similar worded question, however taken from the ‘Global Kids Online’ quantitative toolkit. The question stated “In the past year has anyone treated you in a hurtful or nasty way through social media apps/websites on your smartphone?” The item was scored respectively with a five point likert response from ‘never’ (1) to ‘lots of times’ (4) and a response for ‘I do not have a smart phone’, scored as (0). However, due to this item being a part of a separate scale to the first item, this was placed at the bottom of the questionnaire. Nevertheless, this provided an advantage to the study as the participant’s consistency of responses was able to be tested (Field, 2009). Additionally, due to the scale being made up of 2 items, this increased the reliability of the scale and decreased the likelihood of error (Field, 2009). This is because, if the scale only contained 1 item, and the respondent was fatigued and selected any

answer, the data would 100% be due to error (Field, 2009). Therefore, this provided a rationale for the current study to use two items to make up the online victimisation scale. Higher scores represented higher online victimisation.

Self-esteem:

6 items were used from Thomaes and colleagues (2010) self-esteem scale (refer to appendix A). Each item contained statements about how the participant felt about themselves in the present moment E.G "I feel satisfied with myself right now" (refer to appendix A). Participants responded using a 4 point likert response ranging from 1 'never' to 4 'lots of times'. Items 4B 4D and 4F were recoded so a higher score reflected higher self-esteem. This scale was used as it had high reliability and validity, providing a rationale for the current study to use it (refer to literature review) (Thomaes *et* al, 2010).

Social Anxiety

Social anxiety was measured using Reynolds and Richmond (1985) Revised Children's Manifest Anxiety Scale. 7 items were selected which contained statements about how participant felt about other people E.G "I feel others are happier than I am" (refer to appendix A). Participants respond using a 4 point likert response ranging from 1 'totally true for me' to 4 'not at all true for me' scored respectively. All 7 items were recoded (6A, 6B, 6C, 6D, 6E, 6F, 6G), therefore a higher score reflected higher social anxiety. This scale presented high reliability and validity across previous research which is why the scale was used for the current study (refer to literature review) (Reynolds & Paget, 1981; Reynolds, 1982).

Friendship Quality:

The friendship quality scale by Bukowski, Hoza and Boivin (1994) was used; however, only the companionship and conflict subscales were selected, making up

total of 8 items. Each item contained statements about the participant and their friend E.G “My friend and I spend all our spare time together” (refer to appendix A). Participants then respond using a 4 point likert response ranging from 1 ‘never’ to 4 ‘lots of times’ scored respectively. Items (3E, 3F, 3G, 3H) were recoded so a higher score reflected higher friendship quality. The scale obtained alpha levels of .8 in previous research, along with high levels of validity being reported, which provided a rationale for the current study to use this scale (refer to literature review) (Terrion *et* al, 2015; Lansford *et* al, 2014). However, due to the present study only using 2 sub scales from the overall scale, alpha would have to be carried out on the current sample to ensure its reliability.

Procedure

Design:

A cross sectional survey design was used as participant’s internal states were collected at the same time as their reports of their victimisation experiences (Lindell & Whitney, 2001). This is an effective design as it allows researchers to obtain a large amount of data from participants in just one meeting (Lindell & Whitney, 2001). Therefore, this provided a rationale for the current study to use this design as researchers could only meet with participants once due to lack of funding and time scale of the project.

Data collection:

Each researcher selected the appropriate measures for research with justification of reliability and validity scores used in previous research. All scales were then put together to create one questionnaire which was uploaded onto Bristol online Surveys (BOS) and titled ‘social relationships’.

Schools were then contacted via email and telephone to invite them to take part in the study (refer to appendix B). Those schools that agreed and sent written confirmation and consent were chosen for the study (refer to appendix E2). Ethical approval was sent off to ensure the study was compliant with the University of Chester ethical guidelines, and once approved, research commenced (Refer to appendix E1 and E2). Researchers each individually attended their selected schools and administered the questionnaire on a computer where participants followed the online link (refer to appendix A). Any children who did not wish to take part, informed the teacher and completed additional work quietly on their own. The researcher and school teacher were both present and each child had their own computer to ensure they were not influenced by peers, so that they answered the questions honestly. Participants were informed that the nature of the study was to understand more about social relationships, so minimal psychological stress was endured. Participants were told to read the information sheet, and if they consented to taking part, they should click onto the next page to begin the questionnaire (Refer to appendix C). There was no time limit for participants to complete the questionnaire, but on average participants took approximately 20 minutes to complete it. A debrief was displayed on the last page for participants to read, and researchers directed participants where to seek support if they felt it was required (Refer to appendix D). Any questions were answered by researchers, and all data was saved onto BOS. All of the data could only be accessed by researchers who had a password to access the account.

Data analysis

All the data collected was input into SPSS software. The supervisor ensured each researcher had an individual data set which was unique to them. The data set was then screened, and items which needed to be reverse coded were done so.

Reliability and validity tests were then carried out to ensure all scales were reliable and valid with the current data set. A criterion of 0.7 was set for Cronbach's alpha as this is a recommended criterion which reflects exceptional reliability (Field, 2009; Pallant 2007). PCA was used to test construct validity, using both scree plot and Kaiser's criterion, which highlighted the number of main factors present in each scale (Nunnally Bernstein & Berge 1967; Pallant, 2010). Scree plot considered the number of main factors before the point of inflection from the left, and Kaiser's criterion considered Eigen values above one (Pallant, 2010; Field, 2009). Once the scales were found to have good psychometric properties, the average score for each scale was computed and an overall mean score was provided.

In addition, descriptive statistics, means and Standard deviations were reported along with the correlations. Two Standard multiple regressions were carried out. For the first multiple regression, the dependent variable was offline victimisation and the predictor variables were self-esteem, social anxiety and friendship quality. For the second multiple regression, the dependent variable was online victimisation and the predictor variables were self-esteem, social anxiety and friendship quality.

If significant found to be significant, two hierarchical regressions will be carried out, one for online victimisation and one for offline victimisation. This will highlight how much of the variance, together the predictor variables account for the dependent variable. Then, it will highlight whether each predictor variable uniquely predicts the dependent variable, and if so, how much of the variance they uniquely predict.

Results

Descriptive statistics

Table 2 below reports the means standard deviations and number of participants for each variable. Regression tests will include 2 X standard multiple linear regressions followed by 2 X hierarchical regressions.

Table 2

A table to show the means, standard deviations and number of participants for each variable

Variable	Means	SD	N
Offline Victimisation	.86	.75	644
Online Victimisation	.84	.92	623
Self-esteem	1.96	.72	619
Social Anxiety	1.18	.72	599
Friendship Quality	1.96	.49	630

Testing Psychometric Properties

Reliability:

Reliability for each scale was tested for using Cronbach's alpha, with a criterion of .7 set by the researcher, which reflects high reliability (refer to table 3 below).

Table 3

A table to show alpha levels for each scale used in the current study

Scale	Alpha level
Offline Victimisation	.71
Online Victimisation	.69
Self-esteem	.87
Social Anxiety	.84
Friendship Quality	.641

Table 3 highlights that when reliability was tested for using the current data set, the scales 'online victimisation' and 'friendship quality' did not meet the criterion of 0.7. Therefore, this suggests that these scales are unreliable and will be discussed further in the report.

Validity:

Furthermore, PCA was carried out to ensure each scale was of sufficient validity. Researchers highlight that only 1 main construct should be highlighted if the scale is valid (Field, 2009). Both scree plot and Kaiser's criterion tests were run for each scale (Refer to figures and tables below).

Offline Victimisation

Scree Plot:

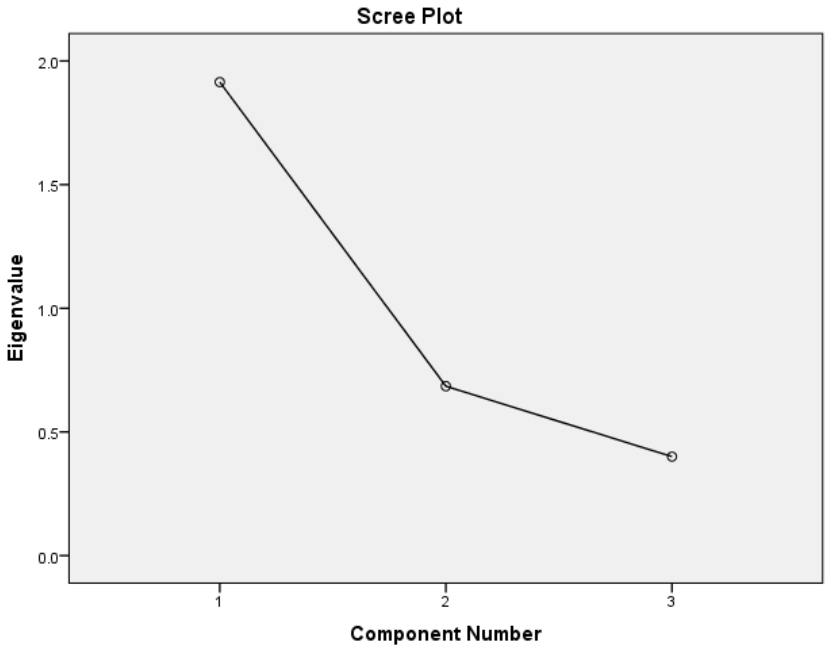

Figure 2

A scree plot to show Eigen values for offline victimisation scale

Kaiser's Criterion:

Table 4

A table to show Eigen Values and percentage of variance for offline victimisation

Component	Eigen Value	% of Variance
1	1.92	63.82
2	.69	22.83
3	.40	13.34

From the results highlighted above, both scree plot and Kaiser's criterion revealed that the offline victimisation scale was unidimensional. This is because

Kaiser's criterion revealed 1 Eigen value above 1, and the scree plot highlighted there was only 1 point of inflection from the left. Therefore, this suggests that the current scale is valid as it only highlights one main construct, which we assume to be offline victimisation. The main factor also accounted for 63.82% of the variance which meets the standards set by previous researchers of 50-70% (Liu, 2011).

Additionally, the factor loadings for how each item contributed to the main factor was considered (Refer to table 5 below). The factor loadings all exceeded the 0.3 criterion set by researchers, therefore showing that each item was measuring the same construct (Pallant, 2007).

Table 5

A table to show factor loading scores for offline victimisation scale

Item	Factor Loading
2a	0.81
2b	0.86
2c	0.72

Online Victimisation scale

Scree Plot:

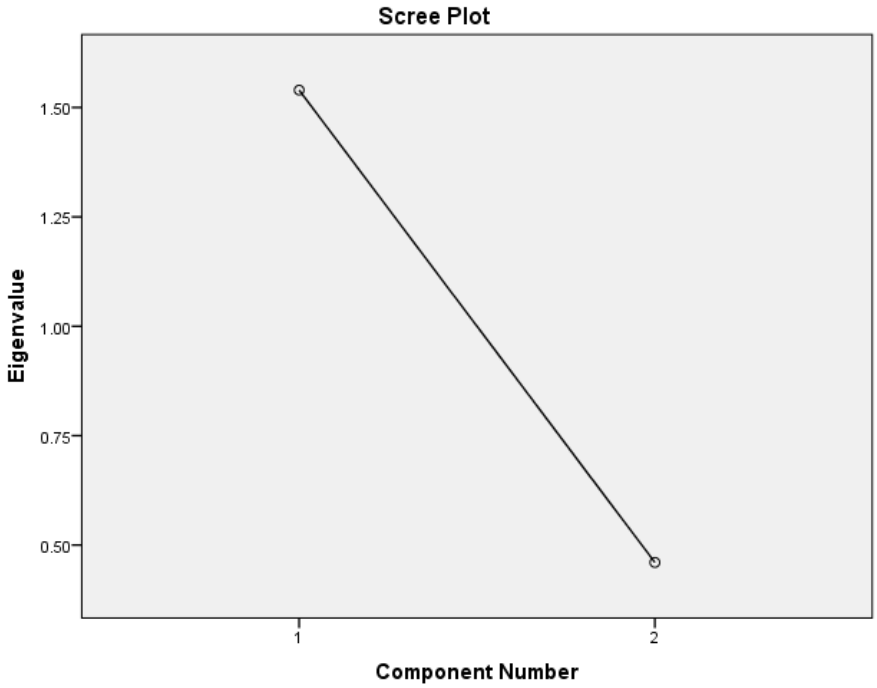

Figure 3

A scree plot to show Eigen values for online victimisation scale

Kaiser's Criterion:

Table 6

A table to show Eigen Values and Percentage of Variance for online victimisation scale

Component	Eigen Value	% of Variance
1	1.54	76.98
2	.46	23.02

The results presented above highlight that there is one main factor present as the scree plot shows one point of inflection from the left, and Kaiser's criterion shows 1 Eigen value above 1. Therefore, this would suggest that the online victimisation scale is valid as it appears to be uni-dimensional. Also, the main factor accounts for 76.98% of variance which exceeds criterion of 50-70% set by researchers (Liu, 2011).

Furthermore, the factor loading scores were taken into account, which all exceeded the 0.3 criterion set by researchers, which suggests that all items load highly to the main factor (Refer to table 7 below) (Pallant, 2010).

Table 7

A table to show factor loadings for online victimisation scale

Item	Factor Loading
2D	0.88
7B2	0.88

Self Esteem scale

Scree Plot:

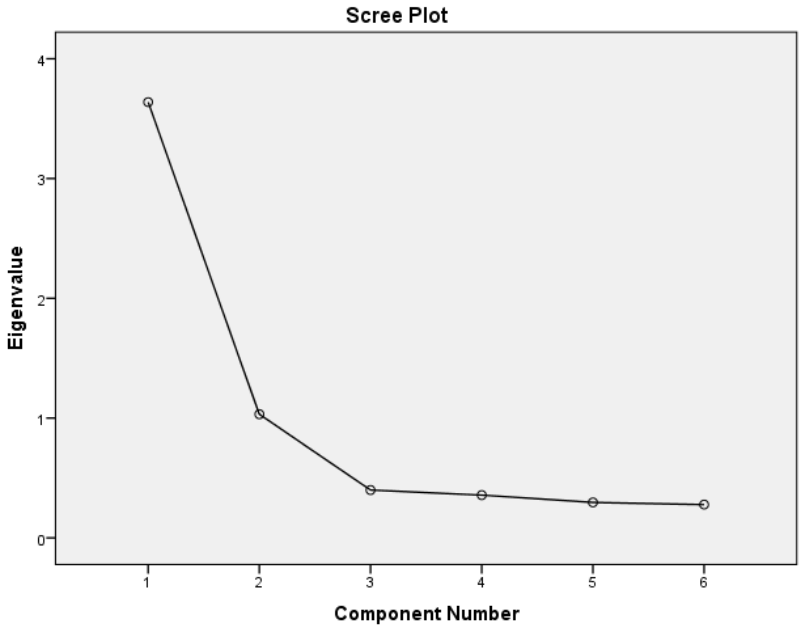

Figure 4

A scree plot to show Eigen values for self-esteem scale

Kaiser's Criterion:

Table 8

A table to show Eigen values and percentage of variance for self-esteem scale

Component	Eigen Value	% of Variance
1	3.64	60.63
2	1.03	17.20
3	.40	6.66
4	.36	5.94
5	.30	4.93
6	.28	4.63

The scree plot highlights that there is one main factor present from the point of inflection from the left; however, Kaiser's criterion highlights that there are two main factors present as 2 Eigen values above 1 are present. Therefore, the current study will adopt Occam's principle of parsimony and accept the simplest form (1 main factor), displayed by the scree plot (Domingos, 1999).

Nevertheless, the factor loadings scores highlight that all items load highly to the 1st main factor as they all exceed the 0.3 criterion set by researchers (refer to table 9 below).

Table 9

A table to show factor loadings for self-esteem scale

Item	Factor Loading
4A	.78
4BR	.77
4C	.75
4DR	.81
4E	.80
4FR	.76

Social Anxiety

Scree Plot:

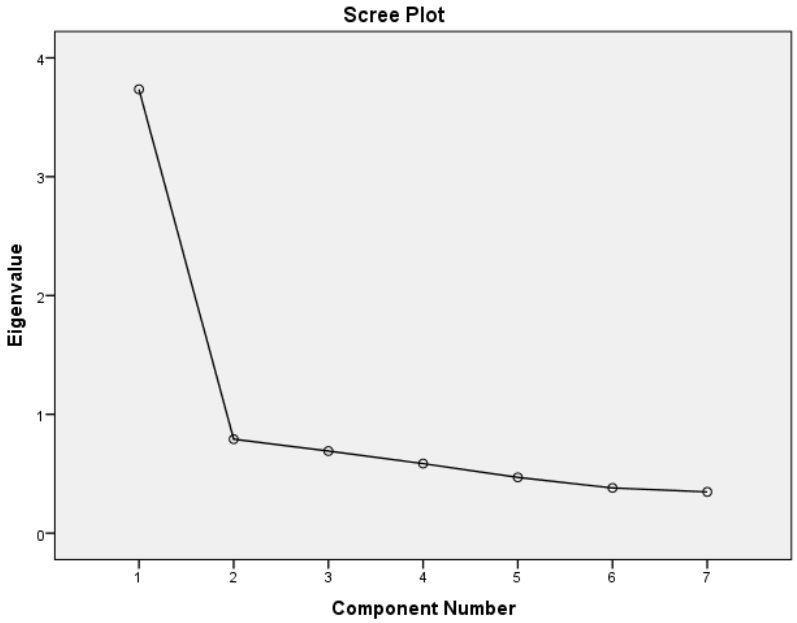

Figure 5

A scree plot to show Eigen values for social anxiety scale

Table 10

A table to show Eigen values and percentage of variance for social anxiety scale

Component	Eigen Value	% of Variance
1	3.74	53.36
2	.791	11.30
3	.691	9.89
4	.59	8.36
5	.47	6.71
6	.38	5.43
7	.35	4.96

It is evident from the results presented above, that one main factor is highlighted by both scree plot and Kaiser's criterion. This is because there is one point of inflection from the left displayed in figure 5, and Kaisers criterion highlights one Eigen value above 1. Therefore, this highlights that the social anxiety scale is unidimensional as we assume the main construct is measuring social anxiety. Also, the main factor accounts for 53.36% of the variance which meets the recommended criteria set by researchers (Liu, 2011)

Moreover, the factor loadings presented in table 11 below highlight that all the items in the scale load highly onto the main factor, as they all exceed recommended criterion of 0.3 (Pallant, 2007).

Table 11

A table to show factor loadings for social anxiety scale

Item	Factor Loading
6AR	.61
6BR	.77
6CR	.80
6DR	.76
6ER	.77
6FR	.57
6GR	.80

Friendship Quality

Scree Plot:

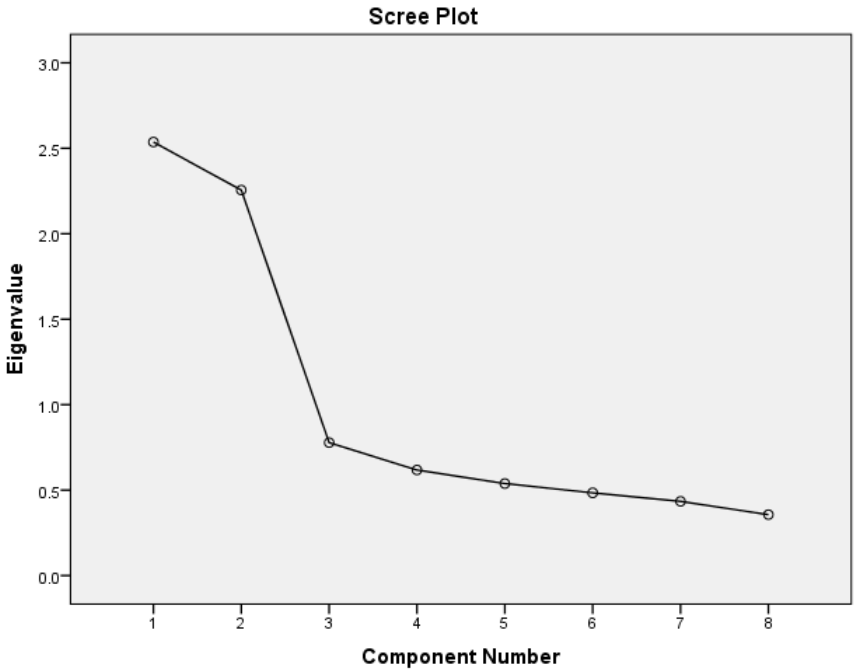

Figure 6

A scree plot to show Eigen values for friendship quality scale

Table 12

A table to show Eigen values and percentage of variance for friendship quality

Component	Eigen Value	% of Variance
1	2.54	31.71
2	2.26	28.20
3	.78	9.72
4	.62	7.72
5	.54	6.73
6	.48	6.05
7	.43	5.43
8	.36	4.46

The results presented above highlight that there are two main factors present. Kaiser's criterion highlights two Eigen values above 1 and scree plot shows 2 points of inflection from the left. However, the friendship quality scale was made up of companionship and conflict; therefore, we expect two main factors to be present.

The factor loadings are displayed in table 13 below. These results highlight that the items which ask participant's about peer conflict (3FR,3GR,3HR,3IR) load highly with component 1, and items measuring companionship (3A,3B,3C,3D) load highly with component 2, all exceeding recommended criterion of 0.3 (Pallant, 2007).Therefore, this allows the current study to assume that the two main factors are companionship and conflict.

Table 13

A table to show factor loadings for friendship quality scale

Item	Factor Loading	
	Component 1	Component 2
3A	-.25	.77
3B	-.22	.78
3C	-.29	.70
3D	-.23	.58
3FR	.72	.22
3GR	.75	.27
3HR	.81	.26
3IR	.75	.16

Bivariate Correlations

The results presented in table 14 and 15 below highlight the correlations between each predictor variables, which were all statistically significant. The correlations between self-esteem, social anxiety and friendship quality showed negative correlations. However, social anxiety and friendship quality showed a positive correlation.

Moreover, when considering correlations between offline victimisation and all of the predictors, these results were also significant (refer to table 14). Offline victimisation correlated with self-esteem and friendship quality showed negative correlations. Finally, offline victimisation when correlated with social anxiety showed a positive correlation

Table 14

A table to show bivariate correlations between predictor variables for offline victimisation

	Offline Victimisation	Self-esteem	Social Anxiety	Friendship Quality
Offline Victimisation				
Self-esteem *N = 619*	- .46			
Social Anxiety *N = 599*	. 59	- .60		
Friendship Quality *N = 630*	- .29	- .39	.32	

In addition, when considering correlations between online victimisation and all of the predictors, these results were also significant (refer to table 15 below). Online

victimisation correlated with self-esteem and friendship quality were found to be negative. However, online victimisation correlated with social anxiety was found to be positive.

All the correlations between each predictor in turn did not exceed 0.7, therefore we do not have a problem of multicollinearity (refer to tables 14 and 15). Therefore, this shows that all of the correlations presented in table 14 and 15 are appropriate for a standard multiple linear regression to be carried out, followed by hierarchical regressions. (Field, 2009).

Table 15

A table to show bivariate correlations between predictor variables for online victimisation

	Online Victimisation	Self-esteem	Social Anxiety	Friendship Quality
Online Victimisation				
Self-esteem *N = 619*	- .36			
Social Anxiety *N = 599*	.49	- .60		
Friendship Quality *N = 630*	- .25	- .39	.32	

Standard Multiple Regression

Offline Victimisation:

The first multiple regression was carried out to test whether self-esteem, social anxiety and friendship quality will predict offline victimisation (refer to table 1 for specific hypotheses). The results are presented in table 16 below. The table highlights that the three predictors collectively accounted for 35% of the variance for offline victimisation ($F(3,552) = 37.98$, $P < .001$ $R^2 = .36$). Self-esteem was found to significantly predict offline victimisation ($B = -.17$, $p < .001$), along with social anxiety ($B = .45$, $p < .001$). However, friendship quality was not found to significantly predict offline victimisation ($B = -.69$, $p > .05$). Overall, social anxiety was found to have a stronger unique contribution to offline victimisation.

Table 16

A table to show standard multiple linear regression results for offline victimisation

		β
Predictor Variables		
Self-esteem		- .17
Social Anxiety		.45
Friendship Quality		- .69
R^2	.36	
Adjusted R^2	.35	

Online Victimisation:

The second multiple linear regression was carried out to investigate whether self-esteem, social anxiety and friendship quality predicted online victimisation. The results are presented in table 17 below. The table highlights that the three predictors collectively accounted for 25% of the variance of online victimisation ($F(3,548) = 38.89$,

P < .001 R^2= .25). Self-esteem was found to significantly predict online victimisation (B = - .13, P < .05) along with social anxiety (B= .38, P < .001). However, friendship quality was not found to significantly predict offline victimisation (B = - .68, P > .05). Overall, social anxiety was found to have a stronger unique contribution to offline victimisation.

Table 17

A table to show standard multiple linear regression results for online victimisation

		β
Predictor Variables		
Self-esteem		- .13
Social Anxiety		.38
Friendship Quality		- .68
R^2	.25	
Adjusted R^2	.25	

Hierarchical Regression

Offline Victimisation:

Due to the first multiple linear regression being significant, a hierarchical regression was carried out to investigate how much of the variance collectively self-esteem, social anxiety and friendship quality accounted for offline victimisation. Additionally, the hierarchical regression also revealed whether each one uniquely predicted offline victimisation and how much variance each predictor uniquely predicted offline victimisation. The results are presented below.

Self-esteem uniquely accounted for 2% of the variance for offline victimisation, which was found to be significant, *F* change (1,552) = 15.06, p < 0.001). Social anxiety uniquely accounted for 11% of the variance, *F* change (1,552) = 97.49, p < .001). However, Friendship Quality did not uniquely predict offline victimisation and only accounted for 0.4% of the variance, *F* change (1, 552) = 3.43, p > .05). Therefore, these results highlight that social anxiety is the most important predictor of offline victimisation. Overall, the predictors accounted for 13.4% of the variance, therefore the remaining 21.6% was the amount of variance shared by all the predictors and the dependent variable (Refer to table 18, 19 and 20 below) (refer to letter A displayed in figure 1 of literature review).

Table 18

A table to show amount of variance self-esteem uniquely predicted offline victimisation

Variable	B	Adjusted R^2	R^2	R^2 change
Stage 1				
Social Anxiety	.45			
Friendship Quality	-.69			
Stage 2		.35	.36	.02
Self-esteem	-.17			

Table 19

A table to show amount of variance social anxiety uniquely predicted offline victimisation

Variable	B	Adjusted R^2	R^2	R^2 change
Stage 1				
Self-esteem	- .17			
Friendship Quality	- .69			
Stage 2		.35	.36	.11
Social Anxiety	.45			

Table 20

A table to show amount of variance friendship quality uniquely predicted offline victimisation

Variable	B	Adjusted R^2	R^2	R^2 change
Stage 1				
Self-esteem	- .17			
Social Anxiety	.45			
Stage 2		.35	.36	.004
Friendship Quality	- .69			

Online Victimisation:

In addition, due to the second multiple linear regression being significant, a hierarchical regression was also carried out to investigate how much of the variance collectively self-esteem, social anxiety and friendship quality accounted for online victimisation. Also, the hierarchical regression highlighted whether each one uniquely

predicted online victimisation, along with how much variance each one uniquely predicted. The results are shown below.

Self-esteem accounted for 1% of the variance for online victimisation, which was found to be significant, *F* change (1,548) = 7.18, p < .05). Social anxiety also uniquely accounted for 8% of the variance for online victimisation, which was found to be significant. *F* change (1,548) = 61.33, p < .001). However, Friendship Quality did not uniquely predict online victimisation as it was not found to be significant and only accounted for 0.4% of the variance, *F* change (1,548) = 2.83, p > .05). Therefore, this highlights that social anxiety is the most important predictor. Overall, the predictors account for 9.4% of the variance. This highlights that 15.6% remaining of the variance is shared by all the predictors and dependent variable (Refer to tables 21, 22 and 23 below) (refer to letter A displayed in figure 1 of literature review).

Table 21

A table to show amount of variance self-esteem uniquely predicts online victimisation

Variable	B	Adjusted R^2	R^2	R^2 change
Stage 1				
Social Anxiety	.38			
Friendship Quality	-.68			
Stage 2		.25	.25	.01
Self-esteem	-.13			

Table 22

A table to show amount of variance social anxiety uniquely predicts online victimisation

Variable	B	R^2 Adjusted	R^2	R^2 change
Stage 1				
Self-esteem	- .13			
Friendship Quality	- .68			
Stage 2		.25	.25	.08
Social Anxiety	.38			

Table 23

A table to show amount of variance friendship quality uniquely predicts online victimisation

Variable	B	R^2 Adjusted	R^2	R^2 change
Stage 1				
Self-esteem	- .13			
Social Anxiety	.38			
Stage 2		.25	.25	.004
Friendship Quality	- .68			

Discussion

The current study focused on offline and online victimisation in order to understand whether children with low self-esteem, social anxiety and poor friendship quality were at a higher risk of being bullied. With the rising increase of children using the internet, the current study highlighted that children are just as vulnerable to being bullied online, as they are offline (Livingstone, 2009). The previous literature presented on offline victimisation as an outcome, highlighted that children who presented risk factors of low self-esteem, social anxiety and poor friendship quality may be at an increased risk of peer victimisation (Hodges Boivin Vitaro & Bukowski,1999; Boivin & Hymel, 1997; Egan & Perry, 1998; Schwartz *et* al, 1993; Rubin *et* al, 2004; Boulton *et* al, 1999). However, due to there being limited literature around online victimisation as an outcome, this allowed the current study to broaden this new avenue of research.

Research hypotheses 1a and 1b were supported (refer to table 1 in literature review) as it was found that self-esteem, social anxiety and friendship quality collectively predicted offline victimisation. It was found that self-esteem, social anxiety and friendship quality accounted for 35% of the variance for offline victimisation. This is consistent with previous research which found children who had internalising problems, were at higher risk of being bullied due to displaying physical traits which suggest they could not protect themselves (Hodges Malone & Perry, 1997; Olweus, 1993; Erath *et* al, 2008; Perry Williard & Perry, 1990). Therefore, the current study broadens this avenue of research as it reveals that children specifically with low self-esteem, social anxiety and poor friendship quality are at risk of being victimised offline.

Conversely, hypothesis 1c was not supported as all 3 predictors did not uniquely predict offline victimisation. Results revealed that self-esteem and social

anxiety did uniquely predict offline victimisation; however, friendship quality did not. The specific results for each predictor will be addressed in issue 1, 2 and 3 below.

Nevertheless, research questions 2a and 2b were supported (refer to table 1 in literature review) as it was found that self-esteem, social anxiety and friendship quality collectively predicted online victimisation. Self-esteem, social anxiety and friendship quality accounted for 25% of the variance for online victimisation. This is consistent with previous research which revealed that 84% of bullies attack online, as they personally knew their victims offline (Ybarra and Mitchel, 2004; Hinduja & Patchin, 2008). Therefore, the current study contributes towards this avenue of research, as it highlights that children specifically with low self-esteem, social anxiety and poor friendship quality are more likely to be victimised online. Additionally, due to the current study being one of the first studies to detect a causal relationship between the predicting factors and online victimisation, this allows for the development of practical applications and interventions.

On the other hand, research question 2c was not supported as not all the predictors uniquely predicted online victimisation. Self-esteem and social anxiety uniquely predicted online victimisation; however, friendship quality did not. The specific results for each predictor will be discussed in issue 1, 2 and 3 below.

Issue 1 – Self-esteem as a predictor of offline and online victimisation

As mentioned above, a hierarchical regression revealed that self-esteem did uniquely predicted offline victimisation, as it was found that lower self-esteem predicted higher levels of offline victimisation. The self-verification theory offers support to these findings as the theory highlights that children with low self-esteem seek out bullies in order to confirm their low self-worth (Troy and Sroufe, 1987; Orth Robins & Roberts,

2008; Hodges Boivin Vitaro & Bukowski,1999). Additionally, the current findings are consistent with previous research which states that children with low self-esteem have a negative view of themselves and others, and are less likely to defend themselves due to the expectation that bad things happen to them (Harter, 1993; Beck's, 1967; Blaine & Crocker, 1993; De La Ronde & Swann, 1993; Egan & Perry, 1998). Therefore, the current study contributes towards this avenue of research as it specifically addresses that children who have lower self-esteem are at an increased risk of being victimised offline.

Similarly, an additional hierarchical regression revealed that self-esteem was found to uniquely predict online victimisation, as it was highlighted that lower self-esteem predicted higher online victimisation. This refutes previous findings which states children are more likely to retaliate and stand up for themselves when interacting with people on the internet, as they have increased confidence when behind a computer (Ybarra and Mitchel, 2004; Prizant-Passal Shechner & Aderka, 2016). Therefore, the current research expands the existing literature, as it reveals contradictory findings. Nevertheless, the current study supports statistics, which reveal that 84% of online bullies target victims they know in real life settings (Hinduja & Patchin, 2008). Therefore, this offers an explanation for the current results, as bullies may be aware of a child's low self-esteem in real life and choose to target them online, as they know they will not defend themselves (Hinduja & Patchin, 2008). However, the current study does not address whether the victim's identity was visible or not when interacting with others online. Therefore, this highlights limitations for the current study as conclusions cannot be made about the findings without this information. As a result, future research should address this, and incorporate additional items into the online victimisation scale that ask victims whether they exposed their identity online or not.

Additionally, the current study considered self-esteem as a 'state' which implies that mood is variable across time, providing a rationale for the scale by Thomaes and colleagues (2010) 'self-esteem in the present moment' to be used. However, other researchers address self-esteem as a 'trait', a specific personality type that is persistent across time (Crocker & Park, 2004). This raises concern as researchers argue that state self-esteem is temporary and only considers momentary reactions to events, which are not a true reflection of how one feels towards themselves (Brown, 2014; Brown & Marshall, 2001). Therefore, as a result of the current study measuring state self-esteem, children's feelings about themselves may not have been accurately recorded as an event may have occurred just before the study, which may have affected their responses. Therefore, caution should be taken when interpreting the results as they may be due to error.

Issue 2 – Social Anxiety as a predictor of online and offline victimisation

Furthermore, social anxiety was found to uniquely predict offline victimisation as it was found that higher social anxiety predicted higher levels of offline victimisation. This is consistent with previous findings which revealed that children who displayed submissive behaviours in play groups, were more likely to be victimised (Schwartz, Dodge, and Coie, 1993). This reinforces that children with social anxiety may be bullied as a result of displaying traits which imply they are different from other children, giving bullies a reason to target them (Boulton et al, 1999). Therefore, the current study contributes towards existing research, as it offers support to the findings. Although Schwartz and colleagues (1993) used an observational method, which implies results may have been due to researcher bias, the current study addresses this limitation and offers further support as similar findings were revealed using self-report data. Additionally, the current findings support Boulton and colleagues (1999) research, which highlights that children with social anxiety were less likely to have friends, due to

avoiding social interaction with others. Therefore, this suggests that the current results may have occurred due to bullies selecting children who appear to socially exclude themselves, and do not have support group of friends to defend them.

In addition, social anxiety was found to uniquely predict online victimisation as it was revealed that higher social anxiety predicted higher levels of online victimisation. These findings refute previous research which states that interacting online reduces anxiety, due there being no face-to-face interaction or social barriers (Prizant-Passal Shechner & Aderka, 2016). Therefore, the current findings may have occurred due to the victim's identities being visible online, allowing bullies to target children who they know are socially anxious in real life settings. This is consistent with findings which highlight incidents occur online due to the internet becoming an extension of the playground (Tynes Rose & Williams, 2010). Therefore, social anxiety may predict online victimisation due to bullies personally knowing their victims. Additional psychological theory reinforces this as it suggests that bullies target individuals online as there is a larger audience of peers from school as well as strangers, which they may seek as a reward (Skinner 1990; Byrne *et* al, 2016). However, as mentioned above, a criticism of the current study is that the visibility of both the victim's and bullies identities were not taken into account.

Issue 3 – Friendship Quality as a predictor of offline and online victimisation

Moreover, another hierarchical regression highlighted that friendship quality did not uniquely predict offline victimisation. This refutes previous research which highlighted that poor friendship quality increases offline victimisation (Hodges Boivin Vitaro & Bukowski,1999; Boulton, Trueman, Chau, Whitehand and Amayta, 1999). Therefore, the current findings expand this avenue of research as it highlights new results, which future researchers can investigate and expand upon. However, it should

be considered that the current results may have occurred due to a number of limitations. It may be that the current findings were not consistent with Hodges Boivin Vitaro & Bukowski (1999) research, as only self-report data was used. Therefore, this leaves room for children to be dishonest about their experiences, which is a possible explanation as to why the results occurred. Several researchers offer further explanation for this as they used additional measures taken from peers and teachers, which provided higher levels of accuracy in their research due to information being provided from multiple sources (Hodges Boivin Vitaro & Bukowski, 1999; Boulton *et* al, 1999). Therefore, the current results may not be consistent with previous findings as a result of children reporting false information about their friendships.

Nevertheless, due to multiple researchers obtaining data, this allowed a larger sample to be recruited. This provided benefits as it increased the statistical power of the data, which resulted in the chances of obtaining a type 1 or type 2 error to be reduced (Field, 2009). Previous research by Hodges *et* al (1999) also highlighted a large sample size, similar to the current study, however such research was limited to French Canadians. Therefore, this highlights that if the current study had strong statistical power similar to Hodges (1999), yet derived different findings on friendship quality, this may be have been due to cultural differences.

Despite this, another hierarchical regression revealed that friendship quality did not uniquely predict online victimisation. This refutes previous research, which suggested that children who had friendships online would be less likely to be victimised online (Boivin *et* al, 1995; Hodges Malone & Perry, 1997). Therefore, the current findings broaden this avenue of research due to contradictory findings being revealed. Nevertheless, such findings may have occurred due to poor psychometric properties of the friendship quality scale. This may be more realistic to assume as it was also found that friendship quality did not predict offline victimisation. Therefore, the current results

may have occurred due to participant's scores being due to error. This will be discussed further in issue 4 below.

Issue 4 – Psychometric Properties

The current study used self-report data as research highlighted this to be an accurate measure of events, due to participants themselves being the most aware of their own personal experiences (Card & Hodges, 2008). However, conflicting research revealed that self-report data can leave room for inaccuracy (Brainerd & Reyna, 2005). This is because asking participants to recall memories is solely relying on their memory of past events, which may be falsely recalled (Brainerd & Reyna, 2005). This can occur as participants may not fully remember every detail of past experiences, and therefore fabricate details in order to fill the gap (Brainerd & Reyna, 2005). Additionally, present perceptions can also colour one's remembrances of events (Weigel, 2007). Taking this into account, future research should consider, as mentioned above, reports from other people such as peers or teachers, which would give a more accurate representation of events alongside self-report data (Hodges Boivin Vitaro & Bukowski, 1999; Boulton *et* al, 1999). Despite this, it was not possible for current study to adopt reports from different sources due to the limited time scale and funding available. Therefore, this implies that the current results may be due to error.

Furthermore, the current study only used 2 sub scales from the original Bukowski, Hoza and Boivin (1994) friendship quality scale. As a result of this, when reliability tests were carried out with the current data set, the alpha level did not meet the 0.7 criterion recommended by researchers (Field, 2009; Pallant, 2010; Cronbach, 1965). This was disappointing as the original scale was selected due to its high reliability in previous research, which highlighted alpha levels of 0.7 to 0.8 (Terrion *et*

al, 2014). Nevertheless, due to alpha not being a property of scale, this was not evident with the current data set as an insufficient alpha level was obtained (Field, 2009; Streiner, 2010). Therefore, this highlighted that participants did not answer consistently across the scale, suggesting that the results which occurred may be due to error (Field, 2009; Pallant, 2010). Therefore, it could be argued that friendship quality may be a predictor of both offline and online victimisation; however, this was not highlighted due to the poor quality scale used, which did not obtain true, meaningful data about children's friendship's.

In addition, the online victimisation scale was not found to be reliable as the alpha level did not meet the 0.7 criterion recommended by researchers (Field, 2009). This may be due to the two items on the scale being separated in the overall questionnaire, with one being placed at the beginning of the questionnaire and one being placed at the end. Therefore, by the time children came to answering the second item, they may have become fatigued and selected any answer without reading the question (Krosnick & Presser, 2010). This is feasible as the overall questionnaire was made up of 52 questions, which may have been too long for the younger participants to maintain concentration (The British Psychological Society, 2017; Krosnick & Presser, 2010). This is reinforced by research which highlights that, from the age of 10, children are aware of the accuracy of time and therefore begin to become restless after around 10 minutes of any task they are not interested in (The British Psychological Society, 2017). Therefore, some of the answers on the questionnaire may be due to error as the overall questionnaire took approximately 20 minutes, which suggests it was likely that children may have become fatigued (Field, 2009).

Similarly, the online victimisation scale contained 1 item from Boulton and colleagues (2008) scale (Item 2D), which did not take into account that some children do not have access to the internet, especially children who are of a younger age. As a

result, the item did not have a response option for this (Refer to appendix A). Therefore, some children may have felt forced to provide an answer due to the limited response options available. This suggests that some of the answers provided by participants on the online victimisation scale may be due to error, as there was not a sufficient amount of response options to reflect their true responses (Field, 2009). However, for the item from the Global Kids Online (item 7B3), this did provide a response option of 'I don't have a smartphone' (Refer to appendix A). Therefore, this highlights why an insufficient alpha level, below 0.7, was obtained, as these young participants may have answered in consistently due to the different response options available for each item. This raises a limitation for the current study, and recommends future research to always provide a non-applicable response option.

Moreover, it should be addressed that both the offline and online victimisation scales only contained items which stated in 'the past year' (Byrne et al, 2016; Boulton *et* al, 2008). This raises limitations for the current study as some participants, particularly the older children, may have been victimised over 1 year ago. However, due to the limited time span of the question, these children would not have been classified as a victim due to their experience occurring over 1 year ago. Therefore, this suggests that the scale does not accurately capture all the possible victims in the data set. As a result, the current study may be due to error as an inaccurate number of online victims was obtained. Future research should consider this, and incorporate items onto the scale which capture all children who have ever been victimised. For example, 'have you ever been victimised online.' This would provide more accurate results and highlight the severity of victimisation.

Additionally, for the self-esteem scale, researchers noticed that it was a common occurrence for participants to ask the meaning of the word 'satisfied' (Thomaes et al, 2010). This is supported by Vygotsky (1978) research which highlights

that children of different ages are at different developmental stages. Although researchers were there to clarify this meaning to those who asked, some children may have completed the question without knowing the true meaning, or left the question blank. Therefore, some of the results on the self-esteem questionnaire may have been due to error as children may have answered the question based on different ideas of what they believed the meaning of 'satisfied' to be (Krosnick & Presser, 2010). This could have been avoided if a pilot test was carried out, which would have raised any issues with the questionnaire prior to the real study (Field, 2009; Krosnick & Presser, 2010). Another consideration may have been to define any large words along with the construct at the beginning of the scale.

Furthermore, as mentioned in issue 2 above, the self-esteem scale only addressed the children's feelings in the present moment, also known as state self-esteem (Thomaes et al, 2010). This raises issues as participant's self-esteem in the present moment may not be the same as their past self-esteem (Crocker & Park, 2004). This is supported by research which found children's self-esteem can often fluctuate, most commonly during adolescence when hormones are high (Block & Robins, 1993; Hall, 1904). This is considered an issue for the current study, as both the offline and online victimisation scales only included items which stated 'in the past year'. This raises concerns as the current research revealed that self-esteem predicted peer victimisation; however, only self-esteem in the present moment was obtained, and only victimisation experiences from the past year were recorded. As a result, children's self-esteem prior to their victimisation experience was not reported, which leaves room for error. Therefore, future research should consider a different scale which measures feelings of self-esteem and victimisation experiences in the same time frame, which would provide a stronger set of variables (Sherer Maddux Mercandante Prentice-Dunn Jacobs & Rogers, 1982).

Nevertheless, the overall questionnaire was published online which provided multiple benefits. Children were able to access the questionnaire through a URL link which was more eco efficient than paper, and also reduced printing costs. Additionally by administering the questionnaire online, this allowed children to develop and test their IT skills which could be argued to have enhanced their learning (Livingstone, 2009). This is supported by research which highlights that the main recourse for children's learning is the computer, which reinforces that this method was the most effective way to encourage children to engage with the task (Livingstone, 2009; Livingstone *et* al, 2012). Conversely, it could be argued that children in the class could be at different developmental abilities, therefore some children may be advanced when using a computer; however, others may struggle (Vygotsky, 1978). This was evident as researchers experienced some children asking for help, even at the beginning stages of the task when entering the URL. This raises issues for the current study as children who were uncertain of how to use the computer may have introduced error if they were unsure how to navigate through the questionnaire and answer questions.

In addition, although participants each had their own computer to complete the online questionnaire, participants were sat next to each other. Therefore, participants may have copied off their peers when the researcher or teacher was turned away (Kimberlin and Winterstein, 2008; Evans & Craig, 1990). This is supported by research which highlights survey respondents often answer questions as a result of social desirability bias, therefore they try to answer questions based on what they believe the researcher will find most favourable and not their own experiences (Kimberlin and Winterstein, 2008; Evans & Craig, 1990). However, this likelihood was reduced as ethical procedures were covered and participants were informed that the questionnaire was not an examination. Nevertheless, because the questionnaire was not timed, this resulted in participants finishing at different times. Therefore, researchers witnessed children who did not finish as rapidly as their peers, rush through the end of the

questionnaire. Therefore, this may have resulted in some results being due to error (Kimberlin and Winterstein, 2008; Evans & Craig, 1990).

Similarly, research highlights that the conditions participants complete the questionnaire under, depends on how seriously they take the task (Krosnick & Presser, 2010). This is supported by findings which revealed children perform differently under different conditions (Manly Anderson Nimmo-Smith Turner Watson & Robertson, 2001). Therefore, due to children being informed that a researcher was taking their class, this may have led children to view the current study as a break from academic work, which they did not have to take seriously. This is supported by research which found children who were less engaged with the task, were more likely to select random response options when answering questions (Krosnick & Presser, 2010). Additionally, due to the researcher being a new face, children were more likely to try and take advantage by doing as little work as possible. This is supported by research which found that when unfamiliar teachers taught the class, both of the children's academic performance and attitudes towards work declined (Birch & Ladd, 1997). Therefore, some of the data obtained may contain error as a result of children's attitudes towards the researcher.

Further Critical Evaluation

Additionally, the current study used a cross sectional survey design which was suitable due to the lack of funding and limited time available to meet with participants. It was also beneficial as it was able to highlight the prevalence of victimisation in children aged 10-16 (Lindell & Whitney, 2001). However, this design also raised limitations for the current study as data for each participant was only recorded once, therefore only an association was able to be made and not a causation (Lindell & Whitney, 2001). Previous studies used longitudinal designs, which was more beneficial as trends over

time were highlighted (Hodges *et* al, 1999; Boulton *et* al, 1999). Therefore, if this design was used for the current study, this would have eliminated the issue of memory recall as trends in victimisation across a span of years would be highlighted (Brainerd & Reyna, 2005). Therefore, if this study was to be carried out again, and funding was provided, this design should be considered.

Nevertheless, an advantage of the current study was that a hierarchical regression was carried out, which researchers state to be a sophisticated analysis which highlights significant unique predictors (Field, 2009; Pallant, 2012; Crozby, 2012). This is a huge benefit as there are many potential factors which could collectively predict victimisation, however, as a result of such a sophisticated analysis being used, the current study was able to conclude that self-esteem and social anxiety were the most important unique predictors of both offline and online victimisation. This however does not completely rule out that friendship quality is not an important factor of offline and online victimisation, because when shared with other predictors, it is considered important. As a result, the current findings highlight the specific factors of what to look for in vulnerable, which will allow researchers to implement practical applications into schools.

Practical Applications

The current research highlights that children with low self-esteem, social anxiety and friendship quality are just as vulnerable to offline victimisation as they are online. Therefore, this highlights that teachers and parents should be more aware of their children's activity online, due to the rising increase in children using the internet (Livingstone, 2009; Livingstone *et* al, 2012). Parents and teachers should be especially aware of children with low self-esteem and social anxiety, as these two predictors both uniquely predicted offline and online victimisation. Considering this, researchers could

go into schools and educate teachers on the signs and symptoms of self-esteem and social anxiety, so they are able to identify vulnerable children and direct them to the school counsellor. Research to support this reveals that high levels of self-esteem acts a protective factor to stressful events (such as victimisation), reinforcing the importance of children being given the opportunity to seek support and increase their self-confidence (Goldbaum Craig Pepler & Connolly, 2003). Additionally, information leaflets could be given to parents to help them understand what symptoms to look for in their child, and how to keep them safe online by monitoring their activity.

More specifically, the KiVa anti bullying programme by Salmivalli and colleagues (2011) was highlighted as an effective intervention to prevent victimisation in schools. It has 'universal actions', which gives all students subjects to work on around bullying, as well as 'indicated actions' which specifically addresses bullying incidents when they occur (Salmivalli Kärnä & Poskiparta, 2011). A 17-20% reduction in victimisation in schools was reported as a result of implementing the KiVa programme (Salmivalli Kärnä & Poskiparta, 2011). However, despite some of the studies involved having small effect sizes, there was still a drastic improvement in the reduction of victimisation, reinforcing that victimisation was prevented for many children. Williford and colleagues (2012) research supports this as they found a decrease in depression and social anxiety in children who engaged with the programme. Therefore, the results from the current study provide a rationale for the KiVa anti bullying programme to be used in schools, as it specifically addresses children's self-esteem and social anxiety, factors which were found to be unique predictors of offline and online victimisation. Conversely, there has been little research into the side effects of the KIVA anti bullying programme and the types of schools and age groups this intervention is most effective with (Salmivalli *et* al, 2011). Therefore, this highlights room for future research to further develop the limited early interventions available for offline victimisation. Additionally, the KiVa programme does not address

online victimisation, which the current study highlights as an issue as children are equally as vulnerable to online victimisation. This highlights the necessity for the development of early online victimisation interventions.

Future research

Although the offline victimisation scale achieved a high alpha level, this only highlighted that children were victimised consistently across all 3 areas of offline victimisation: physical, verbal and psychological. As a result, the current study did not take into account individual scores for each type of offline victimisation. Therefore, this could be highlighted as a limitation of the research, as it does not address what type of offline victimisation children are most vulnerable to. Therefore, future research should take into account whether self-esteem, social anxiety and friendship quality predict different subtypes of offline victimisation. However, research also highlights that there are different subtypes to social anxiety (Cattell & Scheier, 1961; Fenz & Epstein, 1965; Logan & Loo, 1979). Therefore, specific research can address whether a certain type of offline victimisation predicts a certain type of social anxiety. As a result, more detailed and specific interventions could be developed in order to help children.

Moreover, the current study should have addressed that some children may use the internet more frequently than others. This may be an important factor which contributes towards online victimisation as children who use the internet more frequently, may be at a higher risk of online victimisation than those who use it less frequently. Therefore, this may be an idea for future research to consider. Nevertheless, due to the internet being made up of billions of websites and apps, it could be argued that the type of social media accessed by children, may leave some more vulnerable than others (O'Keeffe & Clarke-Pearson, 2011). For example, ‘Facebook’ only allows children to interact with friends they accept online, but the social

media site ‘Instagram’ allows children to interact with billions of people and view their photographs online (O'Keeffe & Clarke-Pearson, 2011). Therefore, it may be that children are more vulnerable to victimisation on ‘Instagram’ than ‘Facebook’. This is an avenue future research could address as it may not be the frequency of usage, but the type of websites being accessed.

Conclusion

In conclusion, the current study investigated whether self-esteem, social anxiety and friendship quality predicted offline and online victimisation. Findings revealed that all 3 factors collectively predicted offline and online victimisation. However, hierarchical regressions further highlighted that only self-esteem and social anxiety uniquely predicted offline and online victimisation, and friendship quality did not. This raised limitations for the current study as the friendship quality scale did not meet sufficient reliability standards, which highlights that the results may have occurred due to error. Nevertheless, the research highlights methodological improvements for future research. Despite this, the findings contributed towards a new avenue of research, highlighting that children with social anxiety and self-esteem are just as vulnerable to online victimisation as they are offline. This helps raise awareness for teachers and parents to monitor children's online and offline activity. Additionally, the current project allows researchers to expand on the findings and develop early interventions to help prevent future generations suffering peer victimisation.

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Appendices:

Appendix A - Questionnaire
Appendix B – Email to schools
Appendix C - Participant Information Sheet
Appendix D – Participant De-Brief
Appendix E1 – Ethics form
Appendix E2 - Amendment form

Section A – Questionnaire

Page 2: Part One

This part of the survey uses a table of questions, view as separate questions instead?

1. About You

	10	11	12	13	14	15	16
Age	○	○	○	○	○	○	○

This part of the survey uses a table of questions, view as separate questions instead?

a.

	Male	Female	Prefer Not to Say
Gender	○	○	○

This part of the survey uses a table of questions, view as separate questions instead?

2.

	Never	Not Very Often	Sometimes	Lots of Times
How often in the last year has another child hit and kicked you to make you feel bad?	○	○	○	○
How often in the last year has another child called you nasty names to make you feel bad?	○	○	○	○
How often in the last year has another child left you out of games and things to make you feel bad?	○	○	○	○
How often in the last year has another child been mean to you in a text or online to make you feel bad?	○	○	○	○
How often in the last year has another child hit or kicked you and you felt bad but they didn't really mean to be nasty to you?	○	○	○	○

How often in the last year has another child left you out of games and things and you felt bad but they didn't really mean to be nasty to you?	○	○	○	○
How often in the last year has another child been mean to you in a text or online and you felt bad but they didn't really mean to be nasty to you?	○	○	○	○

This part of the survey uses a table of questions, view as separate questions instead?

3.

	Never	Not Very Often	Sometimes	Lots of Times
My friend and I spend all our free time together	○	○	○	○
My friend thinks of fun things for us to do together	○	○	○	○
My friend and I go to each other's houses after school and on weekends	○	○	○	○
Sometimes my friend and I just sit around and talk about things like school and things we like	○	○	○	○
I can get into fights with my friend	○	○	○	○
My friend can bug me or annoy me even though I ask him/her not to	○	○	○	○
My friend and I can argue a lot	○	○	○	○
My friend and I disagree about many things	○	○	○	○

This part of the survey uses a table of questions, view as separate questions instead?

4.

	Never	Not very often	Sometimes	Lots of Times
I am satisfied with myself right now	○	○	○	○
I feel down on myself right now	○	○	○	○
I am proud of myself right now	○	○	○	○

I am dissatisfied with myself right now	○	○	○	○
I feel good about who I am right now	○	○	○	○
I am disappointed in myself right now	○	○	○	○

This part of the survey uses a table of questions, view as separate questions instead?

5.

	How much do you agree with these statements?			
	Not at all	Only a bit	Quite a lot	Very much
Being bullied might help somebody learn that it was not their fault?	○	○	○	○
Being bullied might help somebody learn how to not feel bad about themselves?	○	○	○	○
Being bullied might help somebody become a stronger person who can deal better with bad things?	○	○	○	○
Being bullied can never help a person in any way?	○	○	○	○
Being bullied does not help a person learn anything useful about themselves?	○	○	○	○

This part of the survey uses a table of questions, view as separate questions instead?

6.

	Totally true for me	quite a lot true for me	only a bit true for me	not at all true for me
Others seem to do things easier than I can	○	○	○	○
I feel that others do not like the way I do things	○	○	○	○
I feel alone even when there are people with me	○	○	○	○

Other people are happier than I am	○	○	○	○
I feel someone will tell me I do things the wrong way	○	○	○	○
It is hard for me to keep my mind on schoolwork	○	○	○	○
A lot of people are against me	○	○	○	○

This part of the survey uses a table of questions, view as separate questions instead?

7.

	Yes	No
Do you personally own a smartphone (e.g, iPhone or Windows Phone)?	○	○

This part of the survey uses a table of questions, view as separate questions instead?

a.

	Little or no time	About 1 hour	About 2 hours	About 3 hours	About 4 hours	5 or more hours	I don't have a smartphone
About how long do you spend using your smartphone on an ordinary day?	○	○	○	○	○	○	○

This part of the survey uses a table of questions, view as separate questions instead?

b.

	Never	Not Very Often	Sometimes	Lots of Times	I don't have a smartphone
Do you access social media apps/websites on your smartphone (e.g, Facebook, Instagram, Snapchat, WhatsApp, or Twitter)?	○	○	○	○	○

In the past year has anyone treated you in a hurtful or nasty way through social media apps/websites on your smartphone?	○	○	○	○	○
In the past year have you treated anyone in a hurtful or nasty way through social media apps/websites on your smartphone?	○	○	○	○	○

This part of the survey uses a table of questions, view as separate questions instead?

8.

	How much do you agree with the following statements?				
	Not true at all	Rarely true	True sometimes	True Often	True all the time
I am able to adapt to change	○	○	○	○	○
I can deal with whatever comes	○	○	○	○	○
I try to see the humorous side of problems	○	○	○	○	○
Coping with stress can strengthen me	○	○	○	○	○
I tend to bounce back after illness or hardship	○	○	○	○	○
I can achieve goals despite obstacles	○	○	○	○	○
I can stay focused under pressure	○	○	○	○	○
I am not easily discouraged by failure	○	○	○	○	○
I think of myself as a strong person	○	○	○	○	○
I can handle unpleasant feelings	○	○	○	○	○

Section B – Email to schools from students

Dear [insert head teachers' full name]

I am a current student at the University of Chester, studying towards an MSc qualification in Family and Child Psychology. As part of my course, I am required to complete a research project, in which I intend to look at the social relationships and wellbeing of young people between the ages of 11-16. I am just enquiring whether there may be a possibility for me to collect this data from your students using a simple only questionnaire, taking around 15-20 minutes to complete.

The research will be fully ethically approved through the University, and will not record any personal information about students/the school. All questionnaire responses will be anonymous. A copy of the questionnaire can be provided for yourself to view should you wish.

I hope to hear from you soon,

Many thanks

Rachel Kirkham

University of Chester

Section C – Participant Information Sheet

Participant information protocol: to be read by all potential participants

We would like to invite you to take part in a research project. We think you will be able to help us by increasing our awareness about social relationships, bullying and wellbeing of students within schools. We want to know about what you would do in certain situations, when interacting with your peers. We will be collecting this information in class. You will have the chance to complete a 20-minute questionnaire on the computer. There is no need to copy anyone else because this is NOT a test and there are no right or wrong answers. Therefore, try to make sure that other people cannot see your answers.

We do not think the questions are distressing, but if you do feel affected by any of the questions, you might want to tell a teacher or other trusted adult or contact your student support service. Or ChildLine (call 0800 1111 or visit: www.childline.org.uk where you can speak to someone helpful).

You do not have to take part if you do not wish to, and you can stop at any time without giving us a reason. If you think you don't want to answer some questions that is fine too. Remember, this is NOT a test. It is up to you how many questions you want to answer. If you do complete the questionnaire, then your answers will become part of our study because nobody will know who has answered what questions.

If you have any questions or concerns please ask your teacher now.

Section D – Participant De-Brief (Located at the end of online questionnaire)

Our aim is to discover more information about social relationships and wellbeing of young people within schools. We would like to start by thanking you for taking part in our research by completing the questionnaire.

Again we would like to reiterate:

- All of your information will remain anonymous and confidential and will not be seen by anyone else

- If you would like to read our finished research articles, then you can send a request by contacting the researchers via email (this will be once work has been graded)

- If you have felt any kind of discomfort when completing this questionnaire, then there are people available to meet and talk with you if you so wish; details are as follows:

Your own teachers and school support services

Child line:

Call: 0800 1111 or visit: www.childline.org.uk

Section E1 - Ethics Form

Staff / Office Use Only ***DOPEC NUMBER: _____***

APPLICANT SURNAME: Kirkham

Please complete all questions by underlining the correct response to facilitate correct processing

APPLICANT: **UG** **PGT** **PGR** **STAFF**

REVIEW PROCESS: **Accelerated / Full**

APPLICATION STATUS: **NEW APPLICATION, MAJOR AMENDMENT, RESUBMISSION**

APPLICATION FOR: **DISSERTATION, TEACHING, RESEARCH & PUBLICATION**

ATTTENDENCE AT HEALTH & SAFETY BRIEFING: **YES / NO / NA**

INCLUSION OF RISK ASSESSMENT FORM: **YES / NO / NA**

NOTES ON THE ROLE AND FUNCTION OF THE DEPARTMENT OF PSYCHOLOGY ETHICS COMMITTEE.

- *All decisions of the committee are based on the application form and reviewers comments ONLY. Forms should be as detailed and clear as possible. Verbal discussions are not considered as part of the application or review process.*
- *The review process strictly adheres to the University of Chester Research Governance Handbook and the BPS Code of Ethics.*
- *The decision of the committee is final. If you are a UG, PGT or PGR student you should discuss the decision of the committee with your supervisor. If you are a member of staff you may contact the chair of the committee for further clarification.*

Before completing the form researchers are expected to familiarise themselves with the regulatory codes and codes of conduct and ethics relevant to their areas of research, including those of relevant professional organisations and ensure that research which they propose is designed to comply with such codes.

Department of Psychology Ethical Approval for Research: Procedural Guidelines.

University of Chester Research Governance Handbook

http://ganymede2.chester.ac.uk/view.php?title_id=522471

BPS Code of Ethics

http://www.bps.org.uk/system/files/Public%20files/bps_code_of_ethics_2009.pdf

BPS Code of Human Research Ethics

http://www.bps.org.uk/sites/default/files/documents/code_of_human_research_ethics.pdf

CHECK LIST.

Please complete the form below indicating attached materials. Prior to submission supervisors must confirm that they have reviewed the application by completing the supervisors column.

Notes: Students to indicate where information is found, supervisor to confirm by ticking green column	Supervisor confirmation	Information. sheet	Letter	Email	Email info. page	Consent Form	PowerPoint	N/A
Brief details about the purpose of the study	☒	☒	☐	☐	☐	☐	☐	☐
Contact details for further information	☒	☒	☐	☐	☐	☐	☐	☐
Explanation of how and why participant has been chosen	☒	☒	☐	☐	☐	☐	☐	☐
Notification that materials/interviews are not diagnostic tools/therapy or used for staff review/development purposes	☒	☒	☐	☐	☐	☐	☐	☐
Explanation participation is voluntary	☒	☒	☐	☐	☐	☒	☐	☐
Details of any incentives or compensation	☒	☐	☐	☐	☐	☐	☐	☒
Details of how consent will be obtained	☒	☒	☐	☐	☐	☒	☐	☐
If research is observational, consent to being observed	☒	☐	☐	☐	☐	☐	☐	☒
Details of procedure so participants are informed about what to expect	☒	☒	☐	☐	☐	☐	☐	☐
Details of time commitments expected	☒	☒	☐	☐	☐	☐	☐	☐
Details of any stimuli used	☒	☒	☐	☐	☐	☐	☐	☐

Explanation of right to withdraw and right to withdraw procedure	☒	☒	☐	☐	☐	☐	☐	☐
Option for omitting questions participant does not wish to answer	☒	☒	☐	☐	☐	☐	☐	☐
Procedure regarding partially completed questionnaires or interviews	☒	☒	☐	☐	☐	☐	☐	☐
With interviews, information regarding time limit for withdrawal	☒	☒	☐	☐	☐	☐	☐	☐
Details of any advantages and benefits of taking part	☒	☒	☐	☐	☐	☐	☐	☐
Details of any disadvantages and risks of taking part	☒	☒	☐	☐	☐	☐	☐	☐
Information that data will be treated with full confidentiality and that, if published, those data will not be identifiable as theirs	☒	☒	☐	☐	☐	☐	☐	☐
Debriefing details	☒	☒	☐	☐	☐	☐	☐	☐
Dissemination information	☒	☒	☐	☐	☐	☐	☐	☐
Further information (relevant literature; support networks etc)	☒	☒	☐	☐	☐	☐	☐	☐

Supervisor Signature: Mike Boulton ***Date: 6/4/17***

DEPARTMENT OF PSYCHOLOGY APPLICATION TO DEPARTMENTAL ETHICS COMMITTEE

University of Chester

IN COMPLETING THE FORM UG & PGT STUDENTS PLEASE REFER TO YOUR HANDBOOK

Question 1: Working title of the study

Notes: The title should be a single sentence

Social relationships and wellbeing in high school students

Question 2: Applicant, name and contact details.

Notes: The primary applicant is the name of the person who has overall responsibility for the study. Include their appointment or position held and their qualifications. For studies where students and/or research assistants will undertake the research, the primary applicant is the student (UG, PGT, PGR) and supervisor is the co-applicant.

Rachel Kirkham
Postgraduate Student (MSc Family and Child Psychology)
Bsc (Hons) Psychology Degree 2:1
1201413@chester.ac.uk

Question 3: Co-applicants

Notes: List the names of all researchers involved in the study. Include their appointment or position held and their qualifications.

Mike Boulton – Professor, Phd
R.Kirkham – co researcher, Psychology Degree
C.Breen – co researcher, Psychology Degree
M.Burns – co researcher, Psychology Degree
B.Pritchard – co researcher, Psychology Degree
J.Santos – co researcher, Psychology Degree

Question 4: What are the start and end dates of the study?

Notes: If exact dates are unavailable, explain why and give approximate dates.

04/2017 - 12/2017

Question 5: Is this project subject to external funding?

Notes: Please provide details of the funding body, grant application and PI.

No

Question 6: Briefly describe the purpose and rationale of the research

Notes: In writing the rationale make sure that the research proposed is grounded in relevant literature, and the hypotheses emerge from recent research and are logically structured.

PGR / Staff if this application is for a funded project please attach any detailed research proposals as appropriate.

Maximum word length (300 words)

Peer Victimization has been characterized as being the recipient of physical or non-physical forms of aggression and harassment by peers (Hirschtritt et al., 2015). This is an extremely common and persistent problem especially in adolescents (Hirschtritt et al., 2015). These physical and verbal attacks are some of the most common found in schools and its effects can often be detrimental for the individual, especially if this victimization is occurring continuously over an extended period of time (Olywells, 1993; Leymann, 1993).

In recent years the increase in Internet use has also caused an increase in Cyberbullying, especially through various social media sites and chat rooms (Vollink et al., 2012). Livingstone et al., (2011) found that 93% of children have access to the Internet at least once a week. 20% of these children also reported to have been a victim of harassment through the Internet. 15-20% of these children also reported having been made to feel uncomfortable or have been threatened through social media.

Bulling and Peer Victimization has been found to have serious negative effects on the individual, including feeling depressed, lonely, insecure, anxious and angry (Baker & Tanrikulu, 2010). It can also have negative effects on the child's development, lower self esteem, increase anxiety and increase suicidal thoughts as well as suicide attempts (Grills & Ollendick, 2002; Smith Madsen & Moody, 1999; Patchin & Hinduja, 2006).

Although the research into negative effects of bullying and peer victimization is overwhelming, there is also research to suggest that there are possible positive outcomes to peer victimization. Researchers have found that victims have higher friendship quality than non victims and those victims who did not have high friendship quality reported higher levels of loneliness, suggesting that friendships could be a protective factor for peer victimization. (Woods, Done & Kalsi, 2009; Bollmer, Milich, Harris & Maras, 2005).

However, majority of the current research seems to focus on the negative effects and there is a lack of understanding about possible positive effects, like for example, resilience. Therefore this research sets out to investigate both positive and negative effects of traditional and Cyberbullying.

Question 7: Describe the methods and procedures of the study

Notes: Attach any relevant material (questionnaires, supporting information etc.) as appendices and summarise them briefly here (e.g. Cognitive Failures Questionnaire: a standardised self-report measure on the frequency of everyday cognitive slips). Do not merely list the names of measures and/or their acronyms. Include information about any interventions, interview schedules, duration, order and frequency of assessments. It should be clear exactly what will happen to participants. If this is a media based study describe and list materials include links and sampling procedure. (500 words)

The study will collect self-report data from children between the ages of 11 and 16 using an online questionnaire. Prior to beginning the study, participants will be presented with the participant information sheet (Appendix A) highlighting the key aims of the study, the requirements of taking part and clear information regarding ethical issues. All participants will be made aware that their involvement in the study is optional, and that they do not have to take part if they do not wish. Data collection will take place in a computer room, with each child having a computer to access the questionnaire via the webpage link that will be provided.

The questionnaire (refer to appendix C) will be comprised of several sections, measuring victimisation, friendship quality, state self-esteem, perceived positive effects of bullying, social anxiety, resilience, and smartphone and social media usage. To measure victimisation, the Self-Report Victimisation Scale (Boulton et al., 2008) will be used, assessing traditional bullying, cyberbullying and accidental bullying. Friendship quality will be measured using the Friendship Quality Scale using only the companionship and conflict sub-scales (Bukowski, Hoza & Boivin, 1998). Social anxiety will be measured with the social concerns/concentration sub-scale of the Revised Children's Manifest Anxiety Scale, a widely-used measure of various types of anxiety (RCMAS; Reynolds & Richmond, 1985). State self-esteem will be measured with a six-item measure of overall self-worth in the present moment (Thomaes et al., 2010). Resilience will be measured using a concise version of the Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003). Finally, select items from the Global Kids Online quantitative toolkit will be used to measure smartphone and social media usage, currently being used to gather cross-cultural data in relation to children and young people's online behaviour (Global Kids Online, 2016). There will also be questions assessing the possible positive effects of bullying. Simple demographic information will also be recorded, including gender, age and region.

The questionnaire (refer to appendix C) has been constructed using online software, Bristol Online Surveys to enable time and cost effective collection of data from a large pool of participants, which can be extracted into Microsoft Excel and SPSS for data analysis. The questionnaire will be made live upon receipt of ethical approval and will remain live until the project ends in December 2017.

Access to computer facilities will be arranged with the schools prior to data collection taking place, ensuring all participants are able to access the questionnaire quickly and easily. The class teacher will be present at all times during the study, removing the need for a DBS certificate. Participants will be given the opportunity to ask any questions, or for clarification of any items within the questionnaire throughout the data collection process. They will also be informed that they do not have to submit their responses should they decide not to. All submitted data will be kept confidentially in password protected documents only accessible to the research team.

Question 8: Has the person carrying out the study had previous experience of the procedures? If not, who will supervise that person?

Notes: Say who will be undertaking the procedures involved and what training and/or experience they have. If supervision is necessary, indicate who will provide it.

All researchers have administered questionnaires or have had experience taking part in questionnaire research as part of their undergraduate research projects.

The project will be supervised by Professor Mike Boulton

Question 9: What ethical issues does this study raise and what measures have been taken to address them?

Notes: Describe any discomfort or inconvenience that participants may experience. Include information about procedures that for some people could be physically stressful or might impact on the safety of participants, e.g. interviews, probing questions, noise levels, visual stimuli, equipment; or that for some people could be psychologically stressful, e.g. mood induction procedures, tasks with high failure rate. Discuss any issues of anonymity and confidentiality as they relate to your study, refer to ethics handbook and guidance notes at the end of the form. If animal based include ethical issues relating to observation.

Prior to completing the online questionnaire, individuals will be informed about the research through reading an information sheet, detailing the nature of the study and the ethical procedures which will be followed. Participants will consent to taking part (having gained consent from the school and /or parents, see questions 12-15) by completing the questionnaire. Identifiable information will not be recorded, and will therefore remain confidential. Participants' responses will remain anonymous.

Data collected will be stored on the Bristol Online Survey database which is password protected, thus only researchers will have access to this. Participants will complete the questionnaire online and so answers will not be seen by their peers, this should help ensure that all answers are completed honestly. Participants will be told through the information sheet that they have the right to withdraw at any point during the questionnaire; they are also told that they do not have to take part at all if they do not wish to, they can simply just leave the room or wait for others to complete the task. However, it will be made clear through the information sheet that once the questionnaire has been completed then participants will no longer be able to have their data set removed as all data will be kept anonymous.

As participants will be told that the nature of the study is to understand more about social relationships and wellbeing of the students, it is believed by the researchers that minimal psychological distress will be endured by participants (see question 14). All questionnaires have been used within prior research (see question 7 and appendix C) and so we have chosen items that measure our variables of interest.

Debrief for the participants will be given as part of the online session, places to receive further support and information will be provided if needed which include meeting with teachers and student support services (see appendix A) and Childline.

Question 10: Who will the participants be?

Notes: Describe the groups of participants that will be recruited and the principal eligibility criteria and ineligibility criteria. Make clear how many participants you plan to recruit into the study in total.

Participants will be pupils in high school between the ages of 11-16. We are aiming to receive approximately 600 completed questionnaires from across 6 schools throughout the North West of England, Wales and Gibraltar.

Question 11: Describe participant recruitment procedures for the study

Notes: Gives details of how potential participants will be identified or recruited. Include all advertising materials (social media messages, posters, emails, letters, verbal script etc.) as appendices and refer to them as appropriate. Describe any screening examinations. If it serves to explain the procedures better, include as an appendix a flow chart and refer to it.

On a convenient basis, contact will be made to head teachers of secondary schools across the North of England, Wales and Gibraltar via email (refer to appendix B). The recruitment of participants will be based on the head teacher's decision to allow us as researchers, to administer questionnaires in their school. The participants will be selected through an opportunity sample whereby those who are present in the class that day and those who choose to take part.

Question 12: Describe the procedures to obtain informed consent

*Notes: Describe when consent will be obtained. If consent is from **adult participants**, give details of who will take consent and how it will be done. If you plan to seek informed consent from **vulnerable groups** (e.g. people with learning difficulties, victims of crime), say how you will ensure that consent is voluntary and fully informed.*

*If you are recruiting **children or young adults** (aged under 18 years) specify the age-range of participants and describe the arrangements for seeking informed consent from a person with parental responsibility. If you intend to provide children under 16 with information about the study and seek agreement, outline how this process will vary according to their age and level of understanding.*

How long will you allow potential participants to decide whether or not to take part? What arrangements have been made for people who might not adequately understand verbal explanations or written information given in English, or who have special communication needs?

If you are not obtaining consent, explain why not.

The participants selected for this investigation will be 11-16 years of age. Prior to the study, informed consent will be given by a person acting in a position of loco parentis, this being the head teachers of each school. It will also be the head teacher's decision if parental consent is necessary. If so, informed consent will be administered to parents via letter or email that the school will produce.

Participants will be invited to open the link and read the information sheet before proceeding with the questionnaire. This highlights that anyone who doesn't not wish to take part can withdraw at any time up until the questionnaire is submitted (Refer to appendix A). Participants will be given the opportunity to ask any questions, however all necessary information will be on the information sheet. The participants will be made aware that by filling out the questionnaire, they are giving consent. They will also be told that if they change their mind once they have started the questionnaire, they will be able to withdraw with no explanation needed.

Question 13: Will consent be written?

Yes/No (delete as appropriate)

*Notes: If **yes**, include a consent form as an appendix. If **no**, describe and justify an alternative procedure (verbal, electronic etc.) in the space below.*

Guidance on how to draft Participant Information sheet and Consent form can be found on PS6001 Moodle space and in the Handbook.

As mentioned in question 12, informed consent from parents/carers/head teachers will be provided by the head teachers, in the form of an official email or letter if required. In addition, by completing the questionnaire the children have also consented to take part.

Question 14: What will participants be told about the study? Will any information on procedures or the purpose of study be withheld?

Notes: Include an Information Sheet that sets out the purpose of the study and what will be required of the participant as appendices and refer to it as appropriate. If any information is to be withheld, justify this decision. More than one Information Sheet may be necessary.

Participants will be told this study will be investigating social relationships in which bullying is a part of. No other information will be withheld from the participants as they will have read an information sheet and will be informed they will be answering a questionnaire for the purpose of research (See Appendix A)

Question 15: Will personally identifiable information be made available beyond the research team (e.g. report to organisation)?

Notes: If so, indicate to whom and describe how confidentiality and anonymity will be maintained at all stages.

No, all information will be kept anonymous. Head teachers will be offered the opportunity to read the final written report, so they are aware of the findings as a whole.

In order to maintain confidentiality and anonymity at all times No personally identifiable information of the participants will be recorded during the research. After completion the data will be stored on the Bristol Online Survey database before being transferred to SPSS, both of which are password protected and only researchers will have access to these.

Question 16: What payments, expenses or other benefits and inducements will participants receive?

Notes: Give details. If it is monetary say how much, how it will be paid and on what basis is the amount determined. Indicate RPS credits.

Participants will not receive payments, expenses or benefits, they will be told they are contributing to our research and that they may find this interesting.

Question 17: At the end of the study, what will participants be told about the investigation?

Notes: Give details of debriefings, ways of alleviating any distress that might be caused by the study and ways of dealing with any clinical problem that may arise relating to the focus of the study.

Debrief for the participants will be given at the end of the questionnaire, informing them of places to receive further support and information (see appendix D). They will be told to contact teachers or student support services should they experience any discomfort. Further support will be recommended such as Childline if participants wish to stay anonymous.

Question 18: What arrangements are there for data security during and after the study?

Notes: Digital data stored on a computer requires compliance with the Data Protection Act; indicate if you have discussed this with your supervisor and describe any special circumstances that have been identified from that discussion. Say who will have access to participants' personal data and for how long personal data will be stored or accessed after the study has ended.

Data collected will be stored on the Bristol Online Survey database which is password protected, thus only researchers will have access to this. Participants will complete the questionnaire online and so answers will not be seen by their peers, this should mean that all answers are completed honestly. The questionnaire will only be live up until the completion of this project in 12/2017.

Signatures of the study team (including date)

Notes: The primary applicant and all co-applicants must sign and date the form. Scanned or electronic signatures are acceptable.

Professor Mike Boulton – 04/04/2017

Hannah Simpson – 04/04/2017

Justine Santos – 04/04/2017

Megan Burns – 04/04/2017

Fern Beth Pritchard – 04/04/2017

Rachel Kirkham – 04/04/2017

Cara Breen – 04/04/2017

ETHICS COMMITTEE DATE: 20/4/17

CHAIRS COMMENTS:

☑ **Read and address all reviewers comments**

See Supervisor re: Comments.

ACCEPTABLE

☐ **Action: You may now commence with data collection subject to approval from any relevant external agencies.**

DATA COLLECTION IS NOT PERMISSABLE UNDER THESE CONDITIONS

☑ **ACCEPTABLE SUBJECT TO SUBMISSION OF AMENDMENT FORM**

☑ **Acceptable subject to conditions listed by chair. Discuss conditions highlighted with supervisor and submit ethics application amendment form direct to office.**

☐ **Acceptable subject to conditions listed by chair: Submit ethics application amendment form direct to office.**

ACCEPTABLE SUBJECT TO CONDITIONS LISTED BY CHAIR:

☐ **Action: Resubmit application for full review ensuring you have completed section B**

REVISE AND RESUBMIT:

☐ **Action: Resubmit application for full review ensuring you have completed section B**

SIGNATURE: .....

University of Chester

DEPARTMENT OF PSYCHOLOGY
ETHICS REVIEW FORM

A) Applicant and submission details

Name of applicant: Mike Boulton plus students: R.Kirkham, C.Breen, M.Burns, B.Pritchard, J.Santos

Project title: Social relationships and wellbeing in high school students

Applicant status: ☐ UG ☐PGT ☐PGR xStaff

If you are the applicant's supervisor, have you discussed ethical issues with the applicant?

☐Yes, the applicant is an UG/PGT student and I wish to send the application for accelerated student review.

☐Yes, the applicant is a UG/PGT student and I wish to send the application for full review.

☐Yes, the applicant is a PGR student and I wish to send the application for full review.

☐No → Comments:

B) Review of application

1. **Has the applicant signed and dated the form?**
   a) ☐Yes ☐No → Return to applicant for signature before continuing with review process.

2. **What is the submission type?**
   a) xFirst submission to this or any other committee

   b) ☐Resubmission of a rejected application by this committee
      - Is there a summary of the requirements of the committee? Is the original application attached?: ☐ Yes ☐No→ Return to applicant for full details

   c) ☐Revised submission intended to replace an application approved by this committee
      - Is the original application attached?: ☐ Yes ☐No→ Return to applicant for full details

   d) ☐First submission to this committee; has been submitted to another committee.
      - Is the original application attached? ☐ Yes ☐No→ Return to applicant for full details

3. **Research Plan and Methodology**
   a) Is the study well formulated in terms of drawing on the relevant literature and is it methodologically, analytically and scientifically sound?
   x Yes ☐No Comments: **Important note** I was informed that staff 'umbrella' application and all student applications were identical and this seemed to be the case. I have therefore done ONE review for all.

   b) Are the timescales provided appropriate?
   ☐ Yes ☐No Comments: The dates given run to Dec but I presume that data collection would need to be completed within the school Summer term – it would be too late to collect data in the first term of next academic year (although I guess term dates may be different again in Gibralter?). This means there is quite a narrow window of opportunity for data collection.

   c) Are there contingency details?

☐ Yes xNo Comments: Clearly, if schools access cannot be obtained, a different (but potentially related) study would need to be undertaken – and ethical approval would be needed for this.

d) Is there consideration of how to minimise, manage and monitor issues of distress and harm, however minor?
☐ Yes ☐No Comments: I think that wording in info sheet ' We do not think the questions are distressing' is ambiguous – the questions do ask about distressing things – and should be changed.

e) Are appropriate debrief details provided?
☐ Yes ☐No Comments: Information is given about sources of help at the start of the questionnaire and there is some information about sources of help at the end of the questionnaire as well as the research team's e-mail addresses BUT – the ps can only access this information through BOS – how will they save and use this information? I am concerned that information on sources of support needs to be provided to these children in ways that they can keep and use afterwards.
On another issue, I think the wording of the debrief which states that ps can get a report 'once the work has been graded' may be ambiguous – the children may think this means that their own responses are being 'graded' in some way. The research team should instead give a DATE after which a short report on the study findings will be available.

f) Are appropriate details regarding the use and management of deception provided?
☐ Yes ☐No xN/A Comments:

4. Sample size, participants and recruitment

a) Has the applicant provided appropriate details of the sample and how it will be identified?
x Yes ☐No Comments: Data collection is proposed to include a school or schools in Gibralter. The applicants (ie the student planning to recruit in Gibralter and supervisor) will need to submit some evidence that the research will be in keeping with local legal and ethical requirements.

b) Has the applicant provided appropriate details of where the research will take place, including issues regarding permission and appropriate health and safety information? Is the necessary documentation attached?
☐ Yes ☐No Comments: All applicants will need to submit to the ethics committee copies of letters/ mails approving access prior to beginning data collection.

If the applicant is a taught student and they did not attend the mandatory H&S briefing have they provided appropriate evidence that they have full and satisfactory awareness of the relevant health and safety protocol?
☐ Yes ☐No ☐N/A Comments:

c) Has the applicant provided appropriate details and attached the necessary documentation concerning their recruitment procedures? In particular, have they appropriately considered how to minimise, manage and monitor issues of distress and harm?
☐ Yes ☐No Comments: Typo in e-mail to schools – 'only' instead of 'online'

Are there appropriate RPS credits? ☐ Yes ☐No ☐N/A

d) Has the applicant provided appropriate details and attached the necessary documentation concerning the information made available to participants? In particular, are there appropriate considerations if using internet mediated research?
☐ Yes ☐No Comments:

Is there appropriate consideration of how to manage issues of distress and harm?
☐ Yes ☐No Comments:
Are there appropriate details regarding informed consent?
☐ Yes ☐No Comments: The information sheet needs to make clear to ps exactly how they can choose not to take part or withdraw from the study. I presume that this would simply be that they close the web browser but I think this needs to be stated. It especially needs to be clear to the child how they can withdraw part-way through in such a way that any questions they have answered to that point are not seen or used by anyone. I am also concerned that a child may feel that they will be conspicuous if they choose not to take part or to withdraw near the start of the questionnaire. How would you envisage in working, if a child decided not to take part? Could they, for instance, stay online and just browse the web?
Are there appropriate details regarding anonymity and confidentiality?
x Yes ☐No Comments:
Are there appropriate details regarding withdrawal procedures?
☐ Yes ☐No Comments: see above

e) Are there appropriate details regarding time commitment from participants?
x Yes ☐No Comments:

f) Are there appropriate details regarding compensation arrangements?
x Yes ☐No Comments:

g) If using social media for recruitment have details been provided on
   a. Proposed sites and social groups?
      ☐ Yes ☐No Comments:

   b. Social media messages?
      ☐ Yes ☐No Comments:

5. **Data Collection and Analysis**
   a) Has the applicant provided full procedural details and attached the necessary documentation concerning data collection procedures?
   x Yes ☐No Comments: I note that different schools may make different requirements on practicalities of recruitment and questionnaire completion. Any divergenece from what is described here would require submission of a minor amendment form.

6. **Data Analysis**
   a) Has the applicant provided appropriate details concerning data analysis?
   ☐ Yes ☐No Comments:

7. **Data protection and Storage**
   a) Has the applicant provided appropriate details concerning data protection and storage? Have security issues been properly considered?
   ☐ Yes ☐No Comments: If data is to be amalgamated and used in a publication, need information in umbrella application on data storage etc.

8. **Dissemination**
   a) Has the applicant provided appropriate details concerning research dissemination?
   x Yes ☐No Comments:
   Are there appropriate details regarding how privacy and confidentiality will be maintained during dissemination?

☐ Yes ☐No Comments: I presume the number of schools in Gibraltar is quite small so presentation of data will need to avoid potential identification

Are there appropriate details regarding any specific considerations about sharing the research?

☐ Yes ☐No Comments:

General comments: I have highlighted some points which I suggest need further reflection or information. On the whole, this is a strong and careful application. I suggest that outline approval might be given to allow the students to proceed to contact schools about access. In the meantime, suggest submission of amendment forms to address specific issues raised for approval. Finally, confirmation letter / e-mails granting access will need to be submitted to committee prior to commencement of data collection.

Review status

☐ Chair's action

x Staff/PGR for full review ☐ UG/PGT for full review

x Work with external agencies ☐ Work with vulnerable participants

☐ Other issues/concerns

NAME: Ros Bramwell

☐Supervisor ☐Supervisor/Reviewer 1 xReviewer 1 ☐Reviewer 2

DATE: 18/3/17

University of Chester

DEPARTMENT OF PSYCHOLOGY ETHICS REVIEW FORM

A) Applicant and submission details

Name of applicant: Mike Boulton, R Kirkham, C Breen, M Burns, B Pritchard, J Santos, H Simpson

Project title: Social relationships and high school well-being

Applicant status: ☐ UG ☐ PGT ☐ PGR x☐ Staff

If you are the applicant's supervisor, have you discussed ethical issues with the applicant?

☐ Yes, the applicant is an UG/PGT student and I wish to send the application for accelerated student review.

☐ Yes, the applicant is a UG/PGT student and I wish to send the application for full review.

☐ Yes, the applicant is a PGR student and I wish to send the application for full review.

☐ No → Comments:

B) Review of application

1. **Has the applicant signed and dated the form?**
   a) x☐ Yes ☐ No → Return to applicant for signature before continuing with review process.

2. **What is the submission type?**
   a) x☐ First submission to this or any other committee

   b) ☐ Resubmission of a rejected application by this committee
      - Is there a summary of the requirements of the committee? Is the original application attached?: ☐ Yes ☐ No → Return to applicant for full details

   c) ☐ Revised submission intended to replace an application approved by this committee
      - Is the original application attached?: ☐ Yes ☐ No → Return to applicant for full details

   d) ☐ First submission to this committee; has been submitted to another committee.
      - Is the original application attached? ☐ Yes ☐ No → Return to applicant for full details

3. **Research Plan and Methodology**
   a) Is the study well formulated in terms of drawing on the relevant literature and is it methodologically, analytically and scientifically sound?
   x☐ Yes ☐ No Comments:

   b) Are the timescales provided appropriate?
   ☐ Yes x☐ No Comments: If Masters students are involved why is the final date stated as December when they submit in September – clarification needed

   c) Are there contingency details?
   ☐ Yes x☐ No Comments:

   d) Is there consideration of how to minimise, manage and monitor issues of distress and harm, however minor?

x☐ Yes ☐No Comments: Click here to enter text.

e) Are appropriate debrief details provided?
x☐ Yes ☐No Comments:

f) Are appropriate details regarding the use and management of deception provided?
x☐ Yes ☐No ☐N/A Comments:

4. Sample size, participants and recruitment

a) Has the applicant provided appropriate details of the sample and how it will be identified?
☐ Yes x☐No Comments: Permission from schools needed, presumably these are established links of Prof. Boulton? Details needed re: Gibraltar.

b) Has the applicant provided appropriate details of where the research will take place, including issues regarding permission and appropriate health and safety information? Is the necessary documentation attached?
☐ Yes x ☐No Comments:

If the applicant is a taught student and they did not attend the mandatory H&S briefing have they provided appropriate evidence that they have full and satisfactory awareness of the relevant health and safety protocol?
☐ Yes ☐No ☐N/A Comments: Supervisor to comment

c) Has the applicant provided appropriate details and attached the necessary documentation concerning their recruitment procedures? In particular, have they appropriately considered how to minimise, manage and monitor issues of distress and harm?
☐ Yes x☐No Comments: Are the researchers going to be present in the schools or is this all online? How will BPS standards be maintained?

Are there appropriate RPS credits? ☐ Yes ☐No ☐N/A

d) Has the applicant provided appropriate details and attached the necessary documentation concerning the information made available to participants? In particular, are there appropriate considerations if using internet mediated research?
x☐ Yes ☐No Comments: Note that the info sheet contains one of the student's names and not Prof Boulton's.

Is there appropriate consideration of how to manage issues of distress and harm?
x☐ Yes ☐No Comments:
Are there appropriate details regarding informed consent?
x☐ Yes ☐No Comments:
Are there appropriate details regarding anonymity and confidentiality?
x☐ Yes ☐No Comments:
Are there appropriate details regarding withdrawal procedures?
x☐ Yes ☐No Comments:

e) Are there appropriate details regarding time commitment from participants?
x☐ Yes ☐No Comments:

f) Are there appropriate details regarding compensation arrangements?
x☐ Yes ☐No Comments:

g) If using social media for recruitment have details been provided on
   a. Proposed sites and social groups?
      ☐ Yes ☐No Comments:

   b. Social media messages?
      ☐ Yes ☐No Comments:

5. **Data Collection and Analysis**
   a) Has the applicant provided full procedural details and attached the necessary documentation concerning data collection procedures?
      ☐ Yes ☐No Comments: Details needed – how do the students collect the data and distribute between them?

6. **Data Analysis**
   a) Has the applicant provided appropriate details concerning data analysis?
      ☐ Yes x☐No Comments: What variables are being analyzed by the students?

7. **Data protection and Storage**
   a) Has the applicant provided appropriate details concerning data protection and storage? Have security issues been properly considered?
      x☐ Yes ☐No Comments:

8. **Dissemination**
   a) Has the applicant provided appropriate details concerning research dissemination?
      x☐ Yes ☐No Comments:
      Are there appropriate details regarding how privacy and confidentiality will be maintained during dissemination?
      x☐ Yes ☐No Comments:
      Are there appropriate details regarding any specific considerations about sharing the research?
      x☐ Yes ☐No Comments:

General comments: Generally fine although it is not clear what each individual student is doing. Also unable to read through questionnaire and any documentation after as it freezes the screen.

Review status

☐ Chair's action
☐ Staff/PGR for full review ☐ UG/PGT for full review
☐x Work with external agencies ☐ Work with vulnerable participants
☐ Other issues/concerns

NAME: Nicola Davies
☐Supervisor ☐Supervisor/Reviewer 1 ☐Reviewer 1 x☐Reviewer 2
DATE: 11.4.17

Section E2 – Amendment Form

University of Chester

UNIVERSITY OF CHESTER, DEPARTMENT OF PSYCHOLOGY
APPLICATION FOR ETHICAL APPROVAL AMENDMENT FORM

A) Applicant and personnel

Applicant: *Rachel Kirkham*
Project title: *Social relationships and wellbeing in school students*
Applicant status: ☐ Staff → Go to Section B ☐PGR ☐Undergraduate ☒Postgraduate taught
Supervisor: *Mike Boulton*

B) Declaration

1. ☒ I have submitted an application for ethical approval to the Department of Psychology Ethics Committee and I am required to make the following amendments to my application.
List the recommendations of the committee. *Reviewer 1* 1. Dates online survey is open. RESPONSE. This online survey will be located on BOS. It will be open until the end of the school year in July (dates vary from school to school) so that we can collect data in time for our dissertation. We have decided to expand the age group to 10-16 years old so we are also able to use year 6 students. This gives us easier access to participants, due to the limited time remaining of the academic year. 2. Wording on Information Sheet. RESPONSE. We have changed the wording to, "We do not think the questions will upset you...". 3. Sources of support. RESPONSE. We have removed all email addresses in the list of sources of support as it is entirely inappropriate to provide this to school pupils. It is important to note that it is the school's responsibility, as part of its legal duty of care, to ensure that all pupils are aware of sources of support should they feel they are in danger or are distressed. All us as researchers can do is to remind pupils of some of those sources of support. It is not appropriate for us to provide this information to pupils individually. I or my supervisor have never done this in any previous study that we can recall, and have never been asked to do so by any member of school staff. The statement that informs participants that a report will be made available has been deleted. 4. Data collection in Gibraltar. RESPONSE. Data will only be collected in the UK. 5. How participants can withdraw. RESPONSE: The information Sheet now invites participants who want to withdraw as follows, "If you do not want to take part or want to stop part way through, please simply close the survey/browser and read quietly or get on with some work". 6. Data storage. RESPONSE. All data at all times will be stored on password protected computers AND data files will have no personal information (names) as none will be collected. 7. Permission form schools. RESPONSE. I have attached and submitted a confirmation letter/email granting access from the selected school to Ethics Committee prior to data collection. Reviewer 2. 8. Presence of researchers. RESPONSE. Students will be there when data is being collected. 9. Student individual projects. RESPONSE. The variables I intend to analyse are as follows: bullying, victimization, self-esteem, social anxiety, resilience and friendship quality 10. Distributing data to students. RESPONSE. As in previous years, my tutor will produce unique data set for each student to analyze by randomly deleting a small number of data points from the overall data file.
Describe how you have addressed these requirements. .

RKmB31051?

2. ☐ I have submitted an application for ethical approval to the Department of Psychology Ethics Committee that was approved on
I wish the committee to consider the following amendments I would like to make to the research plan (attach the original approved application form) Click here to enter text.

☐ I am a member of staff. **Signed:** _____ **Date:** 11/05/2017
Print the amendment form on BLUE PAPER and submit to the Dept. Office
☒ I am an UG/PGT/PGR student. I have discussed any amendments with my project supervisor.
Print the amendment form on BLUE PAPER and submit to the Dept. Office

Signed: B. E. M. **(Lead Applicant) Date:** 17/05/2017

Supervisor comments:
I have discussed the recommendations of the committee with the applicant and I am satisfied they have met the stated requirements./I support the amendments to the research plan. (delete as appropriate)
☒ Yes Sign and date the form ☐ No Comments: Click here to enter text.

Signed: M J B **(Supervisor) Date:** 25/5/17

COMMITTEE COMMENTS:

☑ ACCEPTABLE: You may now commence with data collection subject to approval from any relevant external agencies.

DATA COLLECTION IS NOT PERMISSABLE UNDER THESE CONDITIONS

☐ ACCEPTABLE SUBJECT TO SUBMISSION OF FURTHER AMENDMENT FORM.

☐ Acceptable subject to conditions listed by chair. Discuss conditions highlighted with supervisor and submit ethics application amendment form direct to office.

☐ Acceptable subject to conditions listed by chair: Submit ethics application amendment form direct to office.

Signed: Maia Z. Lafferty **Date:** Click here to enter a date. 21/5/17

Polly-Ann Smith <Smith.P@marchesschool.net>

Reply all |
16/05/2017, 14:12
RACHEL KIRKHAM
...

Dear Rachel,

The Marches School have given you permission to conduct your research on Tuesday 6th June You are to arrive at School at 9.30 am on this date and you will accompany my classes to computer suites where they will complete your survey. The classes you will be working with are Year 7, 8 and 10 (11-15 years).

I hope this suits your requirements, if you have any queries please contact me before this date.

Kind regards,

Miss Smith
Teacher of English
The Marches School